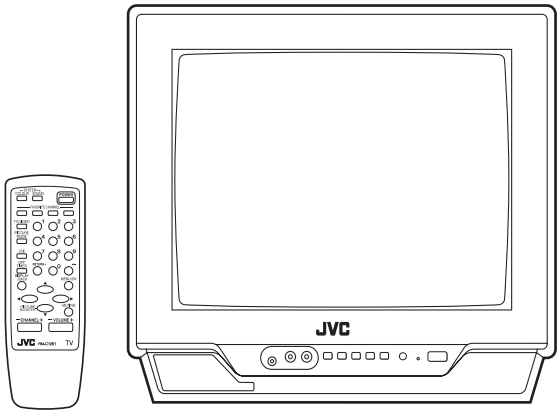
JVC

# SERVICE MANUAL

## COLOUR TELEVISION

# AV-14AG16/U

| BASIC CHASSIS |
| --- |
| CG4 |



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# SPECIFICATION

| Items | | Contents |
|---|---|---|
| Dimensions (W × H × D) | | 36.4 cm × 33.4 cm × 37.4 cm |
| Mass | | 9 kg |
| TV RF System | | B/G, I, D/K, M |
| Colour System | | PAL<br>SECAM<br>NTSC 3.58 / NTSC 4.43 |
| Receiving Frequency | VHF Low<br>VHF High<br>UHF<br>CATV | 46.25 MHz to 140.25 MHz<br>147.25 MHz to 423.25 MHz<br>431.25 MHz to 863.25 MHz<br>Mid (X to Z+2, S1 to S10) / Super (S11 to S20) / Hyper (S21 to S41) bands |
| Intermediate Frequency | VIF | 38.0 MHz (B/G, I, D/K, M) |
| | SIF | 32.5 MHz (5.5 MHz: B/G)<br>32MHz (6.0 MHz: I)<br>31.5MHz (6.5 MHz: D/K)<br>33.5MHz (4.5 MHz: M) |
| Colour Sub Carrier | PAL<br>SECAM<br>NTSC | 4.43 MHz<br>4.40625 MHz / 4.25 MHz<br>3.58 MHz / 4.43 MHz |
| Power Input | | AC110 V to AC240 V, 50 Hz / 60Hz |
| Power Consumption | | 68 W (Max) / 47W(Avg) |
| Picture Tube | | Visible size: 34 cm measured diagonally ( H : 28.7 cm × V : 21.7 cm) |
| High Voltage | | 22.5 kV±1.5kV (at zero beam current) |
| Speaker | | 8 cm Round type × 1 |
| Audio Power Output | | 3 W (monaural) |
| Aerial Input Terminal | | 75 Ω unbalanced, coaxial |
| Input Terminal [Front / Rear] | Video<br>Audio | 1 V(p-p), 75 Ω, RCA pin jack × 2<br>500 mV(rms) (-4 dBs), High impedance, RCA pin jack × 2 |
| Output Terminal [Rear] | Video<br>Audio | 1 V(p-p), 75Ω, RCA pin jack × 1<br>500 mV(rms) (-4 dBs), Low impedance, RCA pin jack × 1 |
| Headphone Jack | | 3.5 mm mini jack × 1 |
| Remote Control Unit | | RM-C360GY (Battery size : AA / R6 / UM-3 × 2) |

Design and specifications are subject to change without notice.

# SECTION 1
# PRECAUTION

## 1.1 SAFETY PRECAUTIONS

(1) The design of this product contains special hardware, many circuits and components specially for safety purposes. For continued protection, no changes should be made to the original design unless authorized in writing by the manufacturer. Replacement parts must be identical to those used in the original circuits. Service should be performed by qualified personnel only.

(2) Alterations of the design or circuitry of the products should not be made. Any design alterations or additions will void the manufacturer's warranty and will further relieve the manufacturer of responsibility for personal injury or property damage resulting therefrom.

(3) Many electrical and mechanical parts in the products have special safety-related characteristics. These characteristics are often not evident from visual inspection nor can the protection afforded by them necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in the parts list of Service manual. **Electrical components having such features are identified by shading on the schematics and by ( ⚠ ) on the parts list in Service manual**. The use of a substitute replacement which does not have the same safety characteristics as the recommended replacement part shown in the parts list of Service manual may cause shock, fire, or other hazards.

(4) **Don't short between the LIVE side ground and ISOLATED (NEUTRAL) side ground or EARTH side ground when repairing.**
Some model's power circuit is partly different in the GND. The difference of the GND is shown by the LIVE : ( ⊥ ) side GND, the ISOLATED (NEUTRAL) : ( ⏚ ) side GND and EARTH : ( ⏚ ) side GND.
Don't short between the LIVE side GND and ISOLATED (NEUTRAL) side GND or EARTH side GND and never measure the LIVE side GND and ISOLATED (NEUTRAL) side GND or EARTH side GND at the same time with a measuring apparatus (oscilloscope etc.). If above note will not be kept, a fuse or any parts will be broken.

(5) If any repair has been made to the chassis, it is recommended that the B1 setting should be checked or adjusted (See ADJUSTMENT OF B1 POWER SUPPLY).

(6) The high voltage applied to the picture tube must conform with that specified in Service manual. Excessive high voltage can cause an increase in X-Ray emission, arcing and possible component damage, therefore operation under excessive high voltage conditions should be kept to a minimum, or should be prevented. If severe arcing occurs, remove the AC power immediately and determine the cause by visual inspection (incorrect installation, cracked or melted high voltage harness, poor soldering, etc.). To maintain the proper minimum level of soft X-Ray emission, components in the high voltage circuitry including the picture tube must be the exact replacements or alternatives approved by the manufacturer of the complete product.

(7) Do not check high voltage by drawing an arc. Use a high voltage meter or a high voltage probe with a VTVM. Discharge the picture tube before attempting meter connection, by connecting a clip lead to the ground frame and connecting the other end of the lead through a 10kΩ 2W resistor to the anode button.

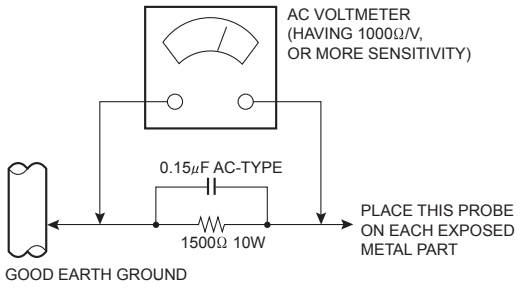
(8) When service is required, observe the original lead dress. Extra precaution should be given to assure correct lead dress in the high voltage circuit area. Where a short circuit has occurred, those components that indicate evidence of overheating should be replaced. Always use the manufacturer's replacement components.

(9) **Isolation Check (Safety for Electrical Shock Hazard)**
After re-assembling the product, always perform an isolation check on the exposed metal parts of the cabinet (antenna terminals, video/audio input and output terminals, Control knobs, metal cabinet, screw heads, earphone jack, control shafts, etc.) to be sure the product is safe to operate without danger of electrical shock.

a) **Dielectric Strength Test**
The isolation between the AC primary circuit and all metal parts exposed to the user, particularly any exposed metal part having a return path to the chassis should withstand a voltage of 3000V AC (r.m.s.) for a period of one second. (. . . Withstand a voltage of 1100V AC (r.m.s.) to an appliance rated up to 120V, and 3000V AC (r.m.s.) to an appliance rated 200V or more, for a period of one second.)
This method of test requires a test equipment not generally found in the service trade.

b) **Leakage Current Check**
Plug the AC line cord directly into the AC outlet (do not use a line isolation transformer during this check.). Using a "Leakage Current Tester", measure the leakage current from each exposed metal part of the cabinet, particularly any exposed metal part having a return path to the chassis, to a known good earth ground (water pipe, etc.). Any leakage current must not exceed 0.5mA AC (r.m.s.).
However, in tropical area, this must not exceed 0.2mA AC (r.m.s.).

**Alternate Check Method**
Plug the AC line cord directly into the AC outlet (do not use a line isolation transformer during this check.). Use an AC voltmeter having 1000Ω per volt or more sensitivity in the following manner. Connect a 1500Ω 10W resistor paralleled by a 0.15μF AC-type capacitor between an exposed metal part and a known good earth ground (water pipe, etc.). Measure the AC voltage across the resistor with the AC voltmeter. Move the resistor connection to each exposed metal part, particularly any exposed metal part having a return path to the chassis, and measure the AC voltage across the resistor. Now, reverse the plug in the AC outlet and repeat each measurement. Any voltage measured must not exceed 0.75V AC (r.m.s.). This corresponds to 0.5mA AC (r.m.s.).
However, in tropical area, this must not exceed 0.3V AC (r.m.s.). This corresponds to 0.2mA AC (r.m.s.).



# SECTION 2
# SPECIFIC SERVICE INSTRUCTIONS

## 2.1 FEATURES

**PICTURE MODE**

This function can adjust the picture settings automatically. There are BRIGHT, STANDARD and SOFT in the PICTURE MODE.

**RETURN +**

This function can set a channel you frequently view to the Return Channel and you can view that channel at any time with one-touch.

**CHILD LOCK**

Use this function to prevent children from operating the TV without parental consent.

**VNR**

This function can reduce the picture noise.

## 2.2 TECHNINAL INFORMATION

### 2.2.1 MAIN MI-COM (CPU) PIN FUNCTION

| Pin No. | Pin name | I/O | Function | Pin No. | Pin name | I/O | Function |
|---|---|---|---|---|---|---|---|
| 1 | REMOCON | I | Remote control | 22 | PROTECT | I | Low B protect detection [Detect: H] |
| 2 | SDA2 | I/O | Data for Inter IC control (For main memory) | 23 | P_ON/OFF | I | Main power control [ON : H] |
| 3 | SCL2 | O | Clock for Inter IC contorl (For main memory) | 24 | LOCK | - | Not used |
| 4 | BUS_FREE | - | Not used | 25 | 3.58/OTH | - | Not used |
| 5 | NC | - | Not used | 26 | 4.5/OTH | - | Not used |
| 6 | KEY1 | I | Key scan for front key (Menu CH -/+) | 27 | H_SYNC | I | Horizontal sync |
| 7 | KEY2 | I | Key scan for front key (Vol -/+) | 28 | I/II | - | Not used |
| 8 | ECO IN | - | Not used | 29 | OSD_Ys | O | Ys (blanking) for OSD |
| 9 | AFT | I | AFT voltage for tuner | 30 | OSD_B | O | Blue for OSD |
| 10 | LED[POW] | - | Not used | 31 | OSD_G | O | Green for OSD |
| 11 | LED[TIM] | O | Liting for timer [Liting : H] | 32 | OSD_R | O | Red for OSD |
| 12 | GND | - | GND | 33 | NC | - | Not used |
| 13 | NC | - | Not used | 34 | RST | I | CPU reset [Reset:L] |
| 14 | NC | - | Not used | 35 | V_SYNC | I | Vertical sync |
| 15 | TV/V | - | Not used | 36 | TCLOCK | - | Not used |
| 16 | TEXT RESET | - | Not used | 37 | SDA1 | I/O | Data for Inter IC control (For generally) |
| 17 | ACL ON/OFF | - | Not used | 38 | SCL1 | O | Clock for Inter IC contorl (For generally) |
| 18 | VOL | O | Volume control | 39 | VDD | I | 3.3V |
| 19 | A_MUTE | O | Aodio muting [Muting : H] | 40 | OSC1 | I | System clock oscillation (4MHz) |
| 20 | NC | - | Not used | 41 | OSC2 | O | System clock oscillation (4MHz) |
| 21 | TEXT/OTH | - | Not used | 42 | VSS | - | GND |

# SECTION 3
# DISASSEMBLY

## 3.1 DISASSEMBLY PROCEDURE

### 3.1.1 REMOVING THE REAR COVER

- Unplug the power cord.
  (1) Remove the 4 screws **[A]**, 1 screw **[B]** and 1 screw **[C]** as shown in Fig.1.
  (2) Withdraw the REAR COVER toward you.

**CAUTION:**

When reinstalling the rear cover, carefully push it inward after inserting the MAIN PWB into the REAR COVER groove.

### 3.1.2 REMOVING THE MAIN PW BOARD

- Remove the REAR COVER.
  (1) Slightly raise the both sides of the MAIN PWB by hand.
  (2) Withdraw the MAIN PWB backward.
  (If necessary, take off the wire clamp and connectors, etc.)

### 3.1.3 REMOVING THE SPEAKER

- Remove the REAR COVER.
- Remove the MAIN PW BOARD.
  (1) Raise the SPEAKER HOLDER claw **[D]** slightly, and remove the SPEAKER HOLDER.
  (2) Remove the SPEAKER.

### 3.1.4 CHECKING THE MAIN PW BOARD

- To check the back side of the MAIN PWB.
  (1) Pull out the MAIN PWB. (Refer to REMOVING THE MAIN PW BOARD).
  (2) Erect the MAIN PWB vertically so that you can easily check its back side.

**CAUTIONS:**

- Before turning on power, make sure that the CRT earth wire and other connectors are properly connected.
- When repairing, connect the DEG. COIL to the DEG. connector on the MAIN PWB.

### 3.1.5 WIRE CLAMPING AND CABLE TYING

(1) Be sure to clamp the wire.
(2) Never remove the cable tie used for tying the wires together.
Should it be inadvertently removed, be sure to tie the wires with a new cable tie.

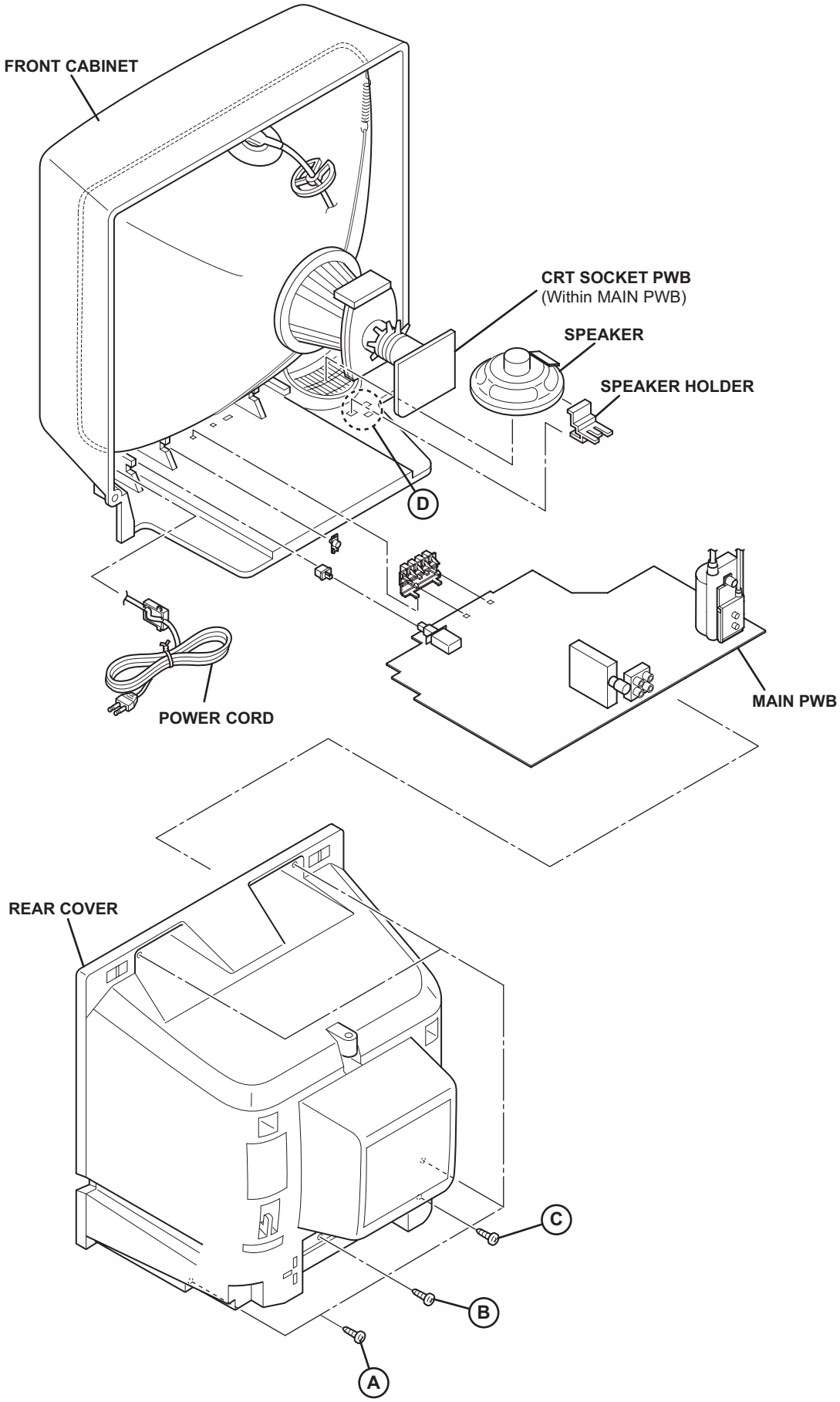

FRONT CABINET
CRT SOCKET PWB
(Within MAIN PWB)
SPEAKER
SPEAKER HOLDER
D
POWER CORD
MAIN PWB
REAR COVER
C
B
A

Fig.1

### 3.2 MEMORY IC REPLACEMENT

- This model uses the memory IC.
- This memory IC stores data for proper operation of the video and drive circuits.
- When replacing, be sure to use an IC containing this (initial value) data.

#### 3.2.1 MEMORY IC REPLACEMENT PROCEDURE

**1. Power off**
Switch off the power and disconnect the power plug from the AC outlet.

**2. Replace the memory IC**
Be sure to use the memory IC written with the initial setting values.

**3. Power on**
Connect the power plug to the AC outlet and switch on the power.

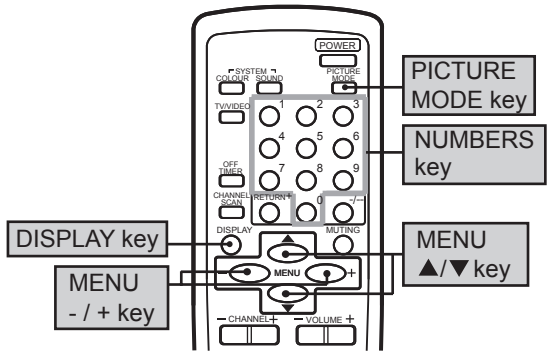
**4. System constant check and setting**
- It must not adjust without adjustment signals.
  (1) Press the **[DISPLAY]** key and the **[PICTURE MODE]** key of the REMOTE CONTROL UNIT simultaneously.
  (2) The SERVICE MENU screen of Fig. 1 will be displayed.
  (3) While the SERVICE MENU is displayed, again press the **[DISPLAY]** key and **[PICTURE MODE]** key simultaneously, and the SYSTEM CONSTANT SET screen of Fig. 2 will be displayed.
  (4) Check the setting values of the SYSTEM CONSTANT SETTING. If the value is different, select the setting item with the **[MENU ▲/▼]** key, and set the correct value with the **[MENU - / +]** key.
  (5) Press the **[DISPLAY]** key twice, and return to the normal screen.

**5. Receiving channel setting**
Refer to the OPERATING INSTRUCTIONS and set the receive channels (Channels Preset) as described.

**6. User settings**
Check the user setting items according to the given in page later.
Where these do not agree, refer to the OPERATING INSTRUCTIONS and set the items as described.

**7. SERVICE MENU setting**
Verify what to set in the SERVICE MENU, and set whatever is necessary (Fig.1).
Refer to the SERVICE ADJUSTMENT for setting.

**KEY ASSIGNMENT OF REMOTE CONTROL UNIT**




```
SERVICE MENU
1.IF          2.V/C
3.DEF         4.VSM PRESET
5.PRESET
6.SETUP TOUR OFF
1-6 : SELECT    DISP : EXIT
```

Fig.1

**SYSTEM CONSTANT- I**

```
SYSTEM CONSTANT SET  1
☞ COLOUR          : MULTI
  BILINGUAL       : NO
  TUNER           : MU
  ECO SENSOR      : NO
  LANGUAGE        : E/R/A/P
▼/▲  : SELECT
 - / +  : OPERATE     DISP : EXIT
```

**SYSTEM CONSTANT- II**

```
SYSTEM CONSTANT SET  2
☞ B/B SOUND       : OFF
  LOCK            : 180
  COLOUR AUTO     : NO
  QSS             : MINT
  ALC             : NO
  TEXT RATE       : 20
▼/▲: SEL - / + : OPE DISP : EXIT
```

**SYSTEM CONSTANT- III**

```
SYSTEM CONSTANT SET  3
☞ AMP TUNER       : NO
  VNR             : YES
  TEXT TABLE      : CYL
  VOLUME PWM      : POS
▼/▲: SEL - / + : OPE DISP : EXIT
```

Fig.2

### 3.2.2 SETTINGS OF FACTORY SHIPMENT

#### 3.2.2.1 BUTTON OPERATION

| Setting item | Setting position |
|---|---|
| POWER | Off |
| CHANNEL | PR1 |
| VOLUME | 10 |

#### 3.2.2.2 REMOTE CONTROL DIRECT OPERATION

| Setting item | Setting position |
|---|---|
| CHANNEL | PR1 |
| VOLUME | 10 |
| TV/VIDEO | TV |
| PICTURE MODE | BRIGHT |
| COLOUR SYSTEM | PAL |
| SOUND SYSTEM | B/G |

#### 3.2.2.3 REMOTE CONTROL MENU OPERATION

**(1) MENU-1**

| Setting item | Setting position |
|---|---|
| INPUT | TV |
| ON TIMER | PR1 0:00 |
| VNR | OFF |

**(2) MENU-2**

| Setting item | Setting position |
|---|---|
| AUTO SHUTOFF | OFF |
| CHILD LOCK | OFF |
| BLUE BACK | OFF |

**(3) MENU-3**

| Setting item | Setting position |
|---|---|
| SETUP TOUR | ON |
| LANGUAGE | ENGLISH |

**(4) MENU-4**

| Setting item | Setting position | | |
|---|---|---|---|
| | BRIGHT | STANDARD | SOFT |
| TINT | 15 | 15 | 15 |
| COLOUR | 15 | 15 | 15 |
| BRIGHT | 15 | 15 | 15 |
| CONT. | 30 | 15 | 13 |
| SHARP | 15 | 15 | 12 |

### 3.2.3 SYSTEM CONSTANT SETTING

| Setting item | Setting value |
|---|---|
| COLOUR | MULTI |
| BILINGUAL | NO |
| TUNER | MU |
| ECO SENSOR | NO |
| LANGUAGE | E / R / A / P |
| B/B SOUND | OFF |
| LOCK | 180 |
| COLOUR AUTO | NO |
| QSS | MINT |
| ALC | NO |
| TEXT RATE | 20 |
| AMP TUNER | NO |
| VNR | YES |
| TEXT TABLE | CYL |
| VOLUM PWM | POS |

### 3.2.4 SERVICE MENU SETTING ITEMS

| Setting item | Setting value | Setting item | Setting value | |
|---|---|---|---|---|
| 2. V/C | 1.CUT OFF<br>2.DRIVE<br>3.BRIGHT<br>4.CONT.<br>5.COLOUR<br>6.TINT<br>7.SECAM BL ADJUST<br>8.SHARP **[Do not adjust]**<br>9.AMP T. SHARP **[Do not adjust]** | 5. PRESET<br>**[Do not adjust]** | Colour System | 1. C-TRAP FIX<br>2. SHARP PEAK<br>3. ABL<br>4. GAMMA<br>5. Y. DELAY TIME<br>6. BLACK EXP START<br>7. C-BPF<br>8. CW / SCP<br>9. VIF DET LEVEL<br>11. IF AGC MIN<br>12. VIF AGC<br>13. VIF PMOD<br>19. VNR<br>20. RGB LIM<br>21. RGB LIMIT LEVEL<br>23. TEXT H. POSITION<br>24. READ DATA |
| 3. DEFLECTION | 1. VER. POSITION<br>2. HOR. POSITION<br>3. VER. HEIGHT<br>4. VER. LINEARITY<br>5. VER. SCURVE<br>6. HOR. VCO ADJUST **[Do not adjust]** | | | |
| 4.VSM PRESET | TINT<br>COLOUR<br>BRIGHT<br>CONT.<br>SHARP | | Sound System | 10. SIF DET LEVEL<br>14. SIF BPF BW ADJUST<br>15. SIF TRAP F0 ADJUST<br>16. SIF TRAP F0 ADJUST 2<br>17. SIF -TRAP<br>18. SIF -BPF<br>22. SIF SW |

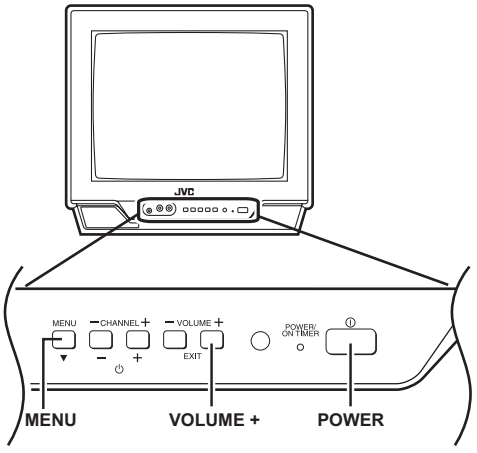
### 3.2.5 REPLACEMENT OF IC301 (IF V/C DECODER)

- **For the IC301(IF V/C DECODER) of this model, all data are written in the micro-computer. So, write the data in the micro-computer in accordance with the following procedures before starting adjustment.**

**■ PROCEDURES**

(1) Turn the POWER OFF.
(2) Replace the IC301 with a new one.
(3) While pressing **[MENU]** button and **[VOL+]** button ON the FRONT CABINET simultaneously, turn the POWER ON. When the POWER is turned ON, the data is written in the micro-computer immediately.

**■ LOCATIONS OF FRONT PANEL BUTTONS**



### 3.3 REPLACEMENT OF CHIP COMPONENT

#### 3.3.1 CAUTIONS

(1) Avoid heating for more than 3 seconds.
(2) Do not rub the electrodes and the resist parts of the pattern.
(3) When removing a chip part, melt the solder adequately.
(4) Do not reuse a chip part after removing it.

#### 3.3.2 SOLDERING IRON

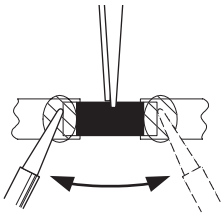
(1) Use a high insulation soldering iron with a thin pointed end of it.
(2) A 30w soldering iron is recommended for easily removing parts.

#### 3.3.3 REPLACEMENT STEPS

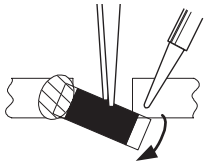
**1. How to remove Chip parts**

**[Resistors, capacitors, etc.]**

(1) As shown in the figure, push the part with tweezers and alternately melt the solder at each end.



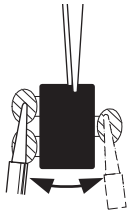
(2) Shift with the tweezers and remove the chip part.



**[Transistors, diodes, variable resistors, etc.]**

(1) Apply extra solder to each lead.

(2) As shown in the figure, push the part with tweezers and alternately melt the solder at each lead. Shift and remove the chip part.



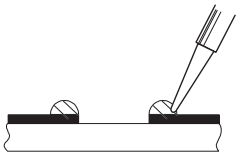
**NOTE :**

After removing the part, remove remaining solder from the pattern.

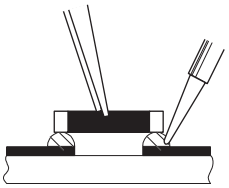
**2. How to install Chip parts**

**[Resistors, capacitors, etc.]**

(1) Apply solder to the pattern as indicated in the figure.

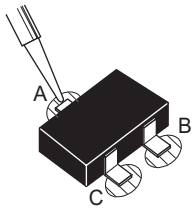


(2) Grasp the chip part with tweezers and place it on the solder. Then heat and melt the solder at both ends of the chip part.

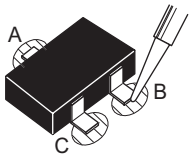


**[Transistors, diodes, variable resistors, etc.]**

(1) Apply solder to the pattern as indicated in the figure.
(2) Grasp the chip part with tweezers and place it on the solder.
(3) First solder lead **A** as indicated in the figure.




(4) Then solder leads **B** and **C**.



# SECTION 4
# ADJUSTMENT

## 4.1 ADJUSTMENT PREPARATION

(1) **There are 2 ways of adjusting this TV : One is with the REMOTE CONTROL UNIT and the other is the conventional method using adjustment parts and components.**
(2) **The adjustment using the REMOTE CONTROL UNIT is made on the basis of the initial setting values. The setting values which adjust the screen to the optimum condition can be different from the initial setting values.**
(3) Make sure that connection is correctly made AC to AC power source.
(4) Turn on the power of the TV and measuring instruments for warming up for at least 30 minutes before starting adjustments.
(5) If the receive or input signal is not specified, use the most appropriate signal for adjustment.
(6) Never touch the parts (such as variable resistors, transformers and condensers) not shown in the adjustment items of this service adjustment.

## 4.2 PRESET SETTING BEFORE ADJUSTMENT

Unless otherwise specified in the adjustment items, preset the following functions with the REMOTE CONTROL UNIT.

| Item | Preset value |
|---|---|
| PICTURE MODE | BRIGHT |
| TINT / COLOUR / BRIGHT / CONT. / SHARP | Centre |
| VNR | OFF |
| BLUE BACK | OFF |
| OFF TIMER | OFF |
| AUTO SHUT OFF | OFF |

## 4.3 MEASURING INSTRUMENT AND FIXTURES

(1) DC voltmeter (or digital voltmeter)
(2) Oscilloscope
(3) Signal generator
(Pattern generator : PAL / SECAM / NTSC)
(4) Remote control unit

## 4.4 ADJUSTMENT ITEMS

### ■ CHECK ITEM
- B1 VOLTAGE check

### ■ TUNER / IF CIRCUIT
- IF VCO adjustment
- DELAY POINT adjustment

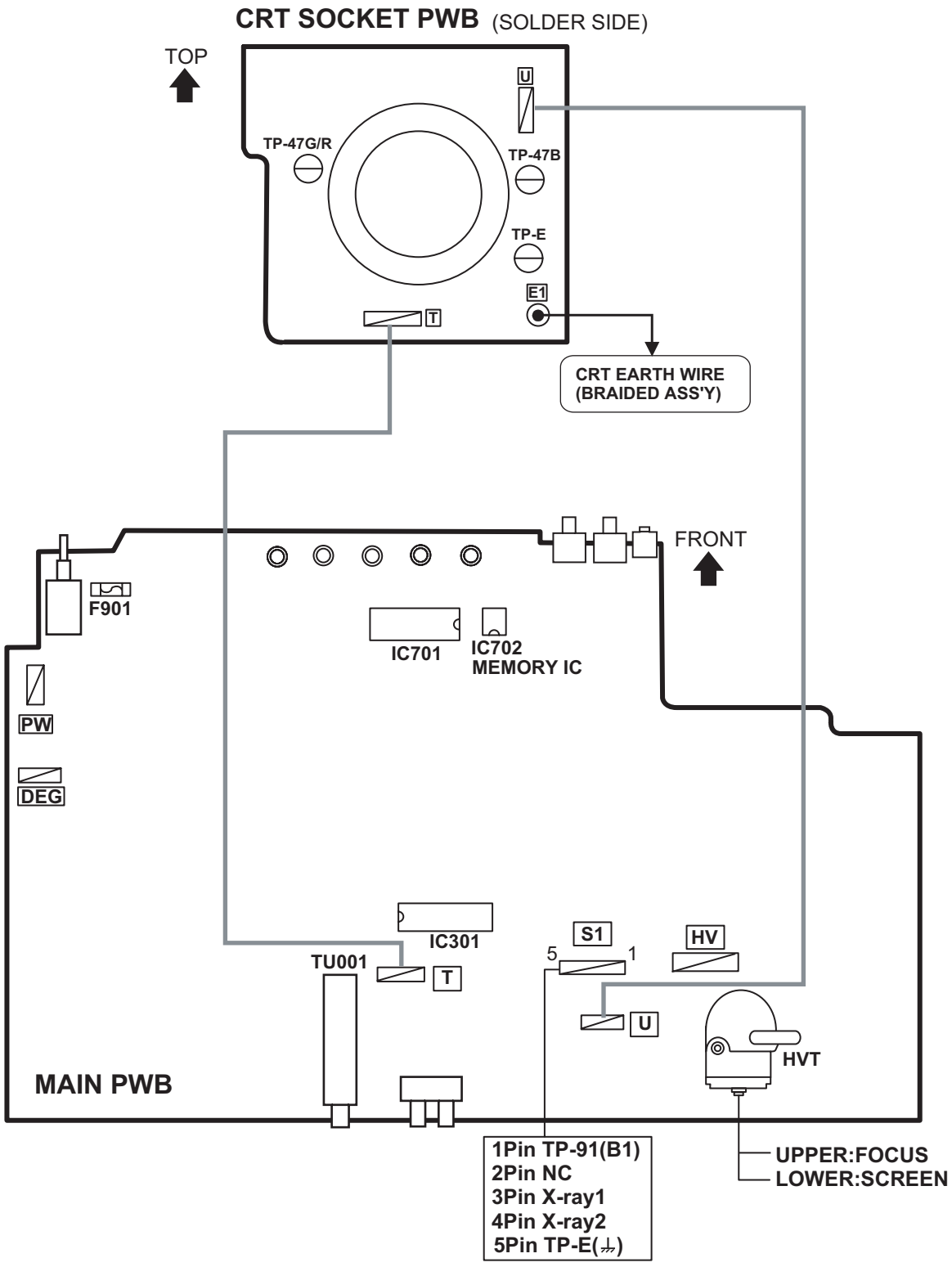
### ■ FOCUS
- FOCUS adjustment

### ■ DEFLECTION CIRCUIT
- V.HEIGHT / V.POSITION adjustment
- H. POSITION adjustment
- V.LINEARITY / V.S-CURVE adjustment

### ■ VIDEO CIRCUIT
- WHITE BALANCE adjustment
- SUB BRIGHT adjustment
- SUB CONTRAST adjustment
- SUB COLOUR adjustment
- SUB TINT adjustment
- SECAM BALACK OFFSET adjustment

### ■ VSM PRESET SETTING
- VSM PRESET setting

## 4.5 ADJUSTMENT LOCATIONS



### 4.6 BASIC OPERATION OF SERVICE MENU

#### 4.6.1 TOOL OF SERVICE MENU OPERATION

Operate the SERVICE MENU with the REMOTE CONTROL UNIT.

#### 4.6.2 SERVICE MENU ITEMS

With the SERVICE MENU, various adjustments can be made, and they are broadly classified in the following items of settings.

| | |
|---|---|
| 1.IF | Adjustment of the IF circuits. |
| 2.V/C | Adjustment of the VIDEO circuit. |
| 3.DEF | Adjustment of the DEFLECTION circuit. |
| 4.VSM PRESET | Adjustment of the initial setting values of VSM condition as STANDARD, SOFT and BRIGHT. |
| 5.PRESET | Adjustment of the RF circuit **[Do not adjust]**. |
| 6.SETUP TOUR | It should be able to select mode (LANGUAGE and AUTO CH PRESET) **[Should be OFF]**. |

#### 4.6.3 HOW TO ENTER THE SERVICE MENU

Press the **[DISPLAY]** key and the **[PICTURE MODE]** key of the REMOTE CONTROL UNIT simultaneously. Then enter the SERVICE MENU mode as shown in Fig.1.

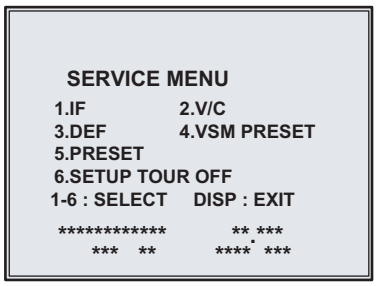



Fig.1

#### 4.6.4 HOW TO STORE THE SETTING VALUE

The setting value will be stored automatically when release the REMOTE CONTROL UNIT keys

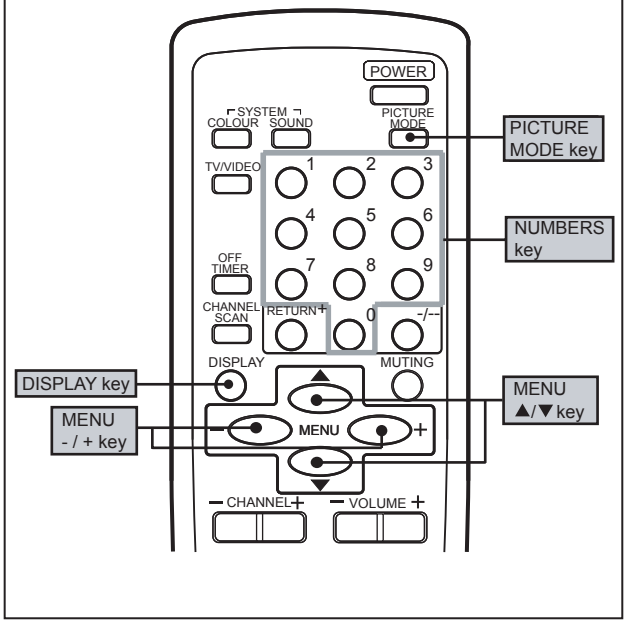
#### 4.6.5 HOW TO EXIT THE SERVICE MENU

When complete the adjustment work, press the **[DISPLAY]** key to return to the SERVICE MENU. And then press the **[DISPLAY]** key again to return to the normal screen.

#### 4.6.6 SELECTION OF SUB MENU SCREEN

Press one of **[1]** to **[5]** keys of the REMOTE CONTROL UNIT and select the SUB MENU SCREEN form the SERVICE MENU.

**SERVICE MODE SELECT KEY**



### 4.6.7 METHOD OF SETTING

■ **1. IF**

[1. VCO]

| | |
|---|---|
| (1) **[1]** key | Select **1. IF**. |
| (2) **[1]** key | Select **1. VCO**. |
| (3) **[MENU ▲/▼]** keys | Select setting items. |
| (4) **[MENU - / +]** keys | Adjust the values of the items. |
| (5) **[DISPLAY]** key | As you press this key twice, you will return to the **SERVICE MENU**. |

[2. DELAY POINT]

| | |
|---|---|
| (1) **[1]** key | Select **1. IF**. |
| (2) **[2]** key | Select **2. DELAY POINT**. |
| (3) **[MENU - / +]** keys | Set (adjust) the setting values of the setting items. |
| (4) **[DISPLAY]** key | When this is pressed twice, you will return to the **SERVICE MENU**. |

**NOTE:**
When the setting value has been changed, the new value will be stored in memory immediately.

■ **2. V/C, 3. DEF and 4. VSM PRESET**

| | |
|---|---|
| (1) **[2]** to **[4]** keys | Select one from **2. V/C**, **3. DEF** and **4. VSM PRESET**. |
| (2) **[MENU ▲/▼]** keys | Select setting items. |
| (3) **[MENU - / +]** keys | Adjust the values of the items. |
| (4) **[DISPLAY]** key | When this is pressed, you will return to the **SERVICE MENU**. |

**NOTE:**
When the setting value has been changed, the new value will be stored in memory immediately.

■ **5. PRESET (Do not adjust)**

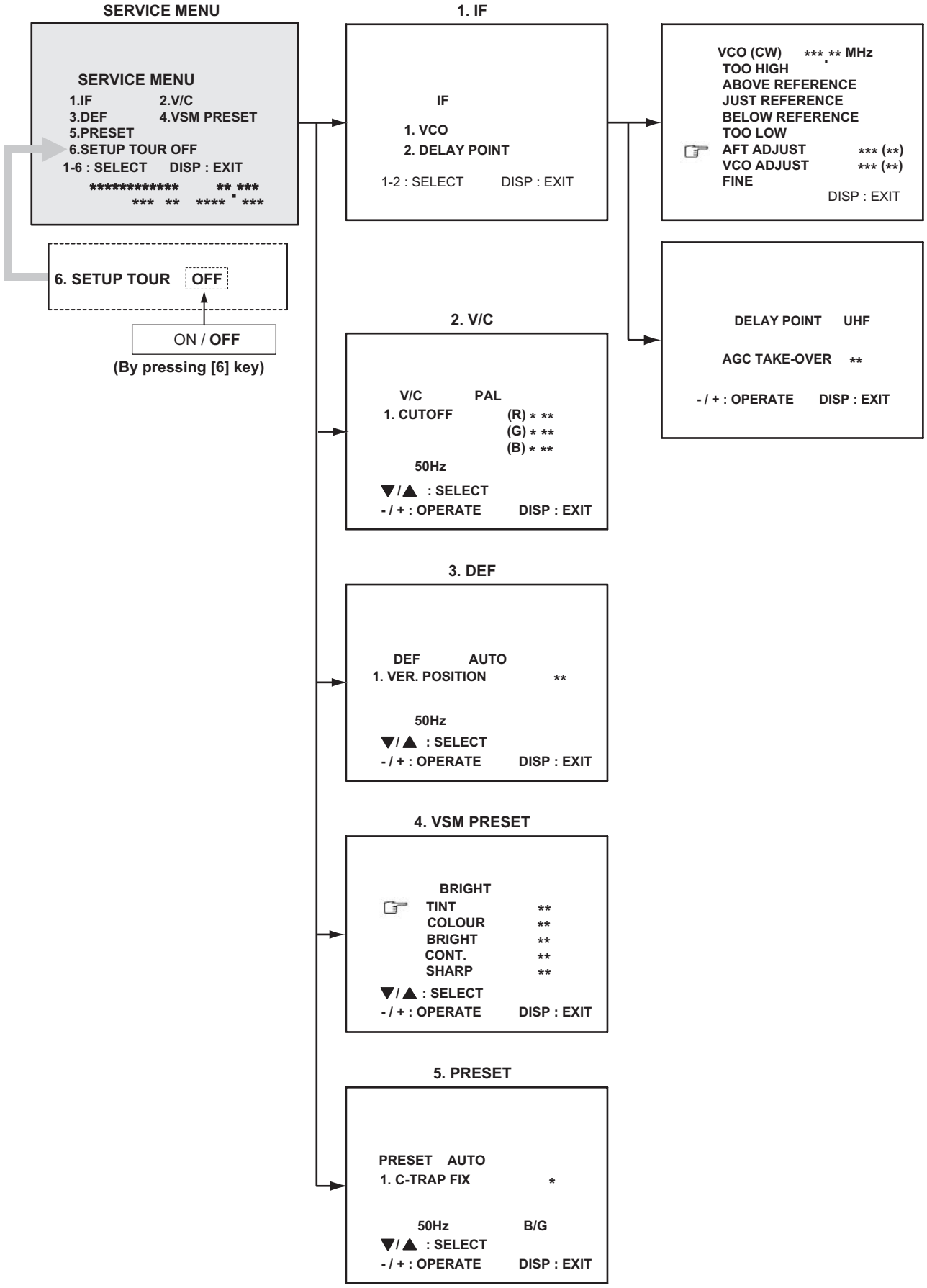
■ **6. SETUP TOUR**

(1) By pressing the **[6]** key, you can change the ON or OFF **[should be OFF]**.

**Should be OFF:**
If it is ON, when you turn off the power and turn on a power again, the JVC's logo will be shown about 15 seconds automatically, and the SETUP TOUR starts.

| | |
|---|---|
| (2) **[MENU - / +]** keys | Select Language. |
| (3) **[MENU ▼]** key | Auto Search. |

### 4.6.8 SERVICE MENU FLOW CHART



### 4.7 INITIAL SETTING VALUE OF SERVICE MENU

- **Adjustment of the SERVICE MENU is made on the basis of the initial setting values ; however, the new setting values which set the screen in its optimum condition may differ from the initial setting.**
- **Do not change the initial Setting Values of the Setting (Adjustment) items not listed in "ADJUSTMENT PROCEDURE".**

**[2. V/C]**

| Setting item | | Variable range | Initial setting value | | | |
|---|---|---|---|---|---|---|
| | | | PAL | SECAM | NTSC 3.58 | NTSC 4.43 |
| 1.CUT OFF | RED | -128 - +127 | -50 | -50 | -50 | -50 |
| | GREEN | -128 - +127 | -50 | -50 | -50 | -50 |
| | BLUE | -128 - +127 | -50 | -50 | -50 | -50 |
| 2.DRIVE | RED | -128 - +127 | +0 | +0 | +0 | +0 |
| | BLUE | -128 - +127 | +0 | +0 | +0 | +0 |
| 3.BRIGHT | | -128 - +127 | +0 | +0 | +0 | +0 |
| 4.CONT. | | -63 - +63 | +0 | +0 | +0 | +0 |
| 5.COLOUR | | -63 - +63 | +0 | +0 | +0 | 0 |
| 6.TINT | TV | -63 - +63 | --- | --- | +0 | 0 |
| | VIDEO | -63 - +63 | --- | --- | +0 | 0 |
| 7.SECAM BL ADJUST | | -31 - +31 | +0 | +0 | +0 | +0 |
| 8.SHARP **(Do not adjust)** | TV | -31 - +31 | -17 (Fixed) | -17 (Fixed) | -17 (Fixed) | -17 (Fixed) |
| | VIDEO | -31 - +31 | +10 (Fixed) | +10 (Fixed) | +10 (Fixed) | +10 (Fixed) |
| 9.AMP T. SHARP | | -31 - +31 | -14 | -14 | -14 | -14 |

**[3. DEFLECTION]**

| Setting item | Variable range | Initial setting value | |
|---|---|---|---|
| | | fv : 50Hz | fv : 60Hz |
| 1. VER. POSITION | -4 - +3 | +0 | -3 |
| 2. HOR. POSITION | -16 - +15 | +1 | +4 |
| 3. VER. HEIGHT | -64 - +63 | -20 | -2 |
| 4. VER. LINEARITY | -32 - +31 | +15 | +0 |
| 5. VER. SCURVE | -32 - +31 | -32 | +0 |
| 6. HOR. VCO ADJUST **[Do not adjust]** | -63 - +63 | +0 | +0 |

**[4.VSM PRESET]**

| Setting item | Variable range | Initial setting value | | |
|---|---|---|---|---|
| | | BRIGHT | STANDARD | SOFT |
| TINT | 0 - 30 | 15 | 15 | 15 |
| COLOUR | 0 - 30 | 15 | 15 | 15 |
| BRIGHT | 0 - 30 | 15 | 15 | 15 |
| CONT. | 0 - 30 | 30 | 15 | 13 |
| SHARP | 0 - 30 | 15 | 15 | 12 |

**[5. PRESET]**

**The items in the following table, it is no requirement for adjustment.If values had changed by the miss operation, set the initial setting values in the following table.**

● **COLOUR SYSTEM (Do not adjust)**

| Setting item | | Variable range | Initial setting value (Fixed value) | | | |
|---|---|---|---|---|---|---|
| | | | PAL | SECAM | NTSC 3.58 | NTSC 4.43 |
| 1. C TRAP FIX | | 0 - 1 | 1 | 1 | 1 | 1 |
| 2. SHARP PEAK | | 0 - 1 | 0 | 0 | 0 | 0 |
| 3. ABL | | 0 - 1 | 1 | 1 | 1 | 1 |
| 4. GAMMA | | 0 - 1 | 0 | 0 | 0 | 0 |
| 5. Y. DELAY TIME | TV | 0 - 3 | 0 | 2 | 2 | 3 |
| | VIDEO | 0 - 3 | 0 | 2 | 0 | 2 |
| 6. BLACK EXP START | | 0 - 3 | 3 | 3 | 3 | 3 |
| 7. C-BPF | TV | 0 - 1 | 1 | 1 | 0 | 0 |
| | VIDEO | 0 - 1 | 1 | 1 | 1 | 1 |
| 8. CW / SCP | | 0 - 1 | 0 | 0 | 0 | 0 |
| 9. VIF DET LEVEL | | -63 - +63 | +0 | +0 | +0 | +0 |
| 11. IF AGC MIN | | 0 - 1 | 0 | 0 | 0 | 0 |
| 12. VIF AGC | | 0 - 1 | 0 | 0 | 0 | 0 |
| 13. VIF PMOD | | 0 - 1 | 0 | 0 | 0 | 0 |
| 19. VNR | | 0 - 63 | 15 | 15 | 15 | 15 |
| 20. RGB LIM | | 0 - 1 | 1 | 1 | 1 | 1 |
| 21. RGB LIMIT LEVEL | | 0 - 7 | 2 | 2 | 2 | 2 |
| 23. TEXT H. POSITION | | -16 - +15 | -3 | -3 | -3 | -3 |
| 24. READ DATA | | --- | --- | --- | --- | --- |

● **SOUND SYSTEM (Do not adjust)**

| Setting item | Variable range | Initial setting value (Fixed value) | | | |
|---|---|---|---|---|---|
| | | B/G | I | D/K | M |
| 10. SIF DET LEVEL | -7 - +7 | +0 | +0 | +0 | +0 |
| 14. SIF BPF BW ADJUST | -7 - +7 | +0 | +0 | +0 | +0 |
| 15. SIF TRAP FO ADJUST | -7 - +7 | +0 | +0 | +0 | +0 |
| 16. SIF TRAP FO ADJUST 2 | -7 - +7 | +0 | +0 | +0 | +0 |
| 17. SIF -TRAP | 0 - 1 | 0 | 0 | 0 | 0 |
| 18. SIF -BPF | 0 - 1 | 0 | 0 | 0 | 1 |
| 22. SIF SW | 0 - 1 | 1 | 1 | 1 | 0 |

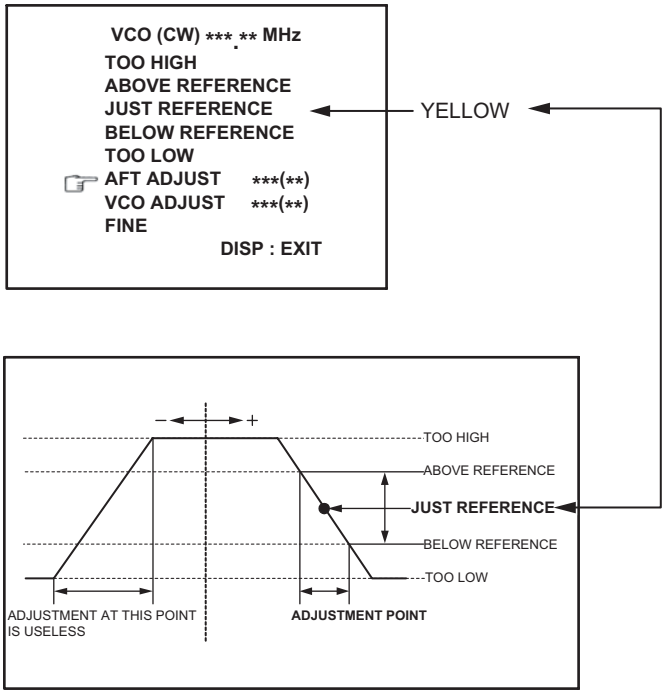
## 4.8 ADJUSTMENT PROCEDURE

### 4.8.1 CHECK ITEM

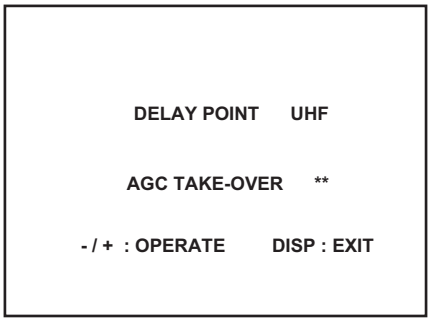
| Item | Measuring instrument | Test point | Adjustment part | Description |
|---|---|---|---|---|
| **B1 VOLTAGE** | Signal generator<br><br>DC voltmeter | TP-B1 : 1-pin<br>TP-E : 5-pin<br>(S1 connector)<br>[MAIN PWB] | | (1) Receive a whole black signal.<br>(2) Connect a DC voltmeter to 1-pin and 5-pin of S1 connector.<br>(3) Make sure that the voltage is DC116.2V±2.0V. |

### 4.8.2 TUNER / IF CIRCUIT

| Item | Measuring instrument | Test point | Adjustment part | Description |
|---|---|---|---|---|
| **IF VCO** | Signal generator<br><br>Remote control unit | | [1. IF]<br>1. VCO | • Please use a signal generator which is frequency output is correctly calibrated.<br>(1) Receive any broadcast.<br>(2) Select 1.IF from the SERVICE MENU.<br>(3) Select **< 1.VCO >**.<br>(4) Select VCO ADJUST with **[MENU ▲/▼]** key.<br>(5) Press **[MENU - / +]** keys until the colour of the characters TOO HIGH changes blue to yellow. Then gradually press the **[MENU - / +]** keys until the TOO LOW changes yellow. At this time, confirm that the value of VCO ADJUST is near +00.<br>(6) Select AFT ADJUST with **[MENU ▲/▼]** key.<br>(7) Press **[MENU - / +]** keys until the characters JUST REFERENCE changes blue to yellow.<br>(8) Press the **[DISPLAY]** key three times to return to normal screen. |



| Item | Measuring instrument | Test point | Adjustment part | Description |
|---|---|---|---|---|
| **DELAY POINT (AGC)** | Signal generator<br><br>Remote control unit | | [1. IF]<br>2. DELAY POINT (AGC TAKE-OVER) | (1) Receive a black and white signal (colour off).<br>(2) Select 1. IF.<br>(3) Select **< 2. DELAY POINT >**.<br>(4) Set the setting values of the setting items as shown bellow table.<br>(5) Then adjust the **[MENU - / +]** keys until video noise disappears.<br>(6) Turn to other channels and make sure that there are no irregularities. |




| Setting Item | | Variable range | Initial setting value |
|---|---|---|---|
| DELAY POINT (AGC TAKE-OVER) | NTSC3.58 | 0 - 127 | 45 |
| | OTHER | | 35 |

#### 4.8.3 FOCUS

| Item | Measuring instrument | Test point | Adjustment part | Description |
|---|---|---|---|---|
| **FOCUS** | Signal generator | | FOCUS VR<br>[In HVT] | (1) Receive a crosshatch signal.<br>(2) While watching the screen, adjust the FOCUS VR to make the vertical and horizontal lines as fine and sharp as possible.<br>(3) Make sure that when the screen is darkened, the lines remain in good focus. |

### 4.8.4 DEFLECTION CIRCUIT

- There are 2 modes of adjustment (setting value) 50Hz mode and 60Hz mode, depending upon the kind of signals (vertical frequency 50Hz / 60Hz).
- When adjusted in 50Hz mode and 60Hz mode will be automatically set.
  **The setting (adjustment) using the REMOTE CONTROL UNIT is made on the basis of the initial setting values.The setting values which adjust the screen to the optimum condition can be different from the initial setting values.**
- Make sure that the adjustment is properly done on the screen of 60Hz mode.

**NOTE:**

- Adjust to make both 50Hz & 60Hz are the same v. size and fine straight line.
- When adjust again, adjust 50Hz mode first.
- When adjust in 60Hz mode, only 60Hz mode is adjust.

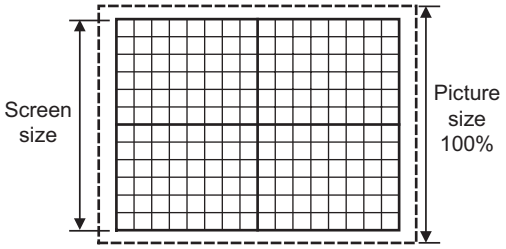
<table>
<tr><th>Item</th><th>Measuring instrument</th><th>Test point</th><th>Adjustment part</th><th>Description</th></tr>
<tr><td>V. HEIGHT /<br>V. POSITION</td><td>Signal generator<br><br>Remote control unit</td><td></td><td>[3. DEF]<br>1. VER. POSITION<br>3. VER. HEIGHT</td><td rowspan="2">(1) Receive a crosshatch signal.<br>(2) Select 3. DEF from the SERVICE MENU.<br>(3) Select < 1. VER. POSITION >.<br>(4) Set the initial setting value of < 1. VER. POSITION >.<br>(5) Adjust < 1. VER. POSITION > to make the vertical centre fall on the display centre.<br>(6) Select <3. VER. HEIGHT >.<br>(7) Set the initial setting value of <3. VER. HEIGHT >.<br>(8) Adjust <3. VER. HEIGHT > to make the vertical screen size be 92% of the picture size.</td></tr>
<tr><td colspan="4"> 

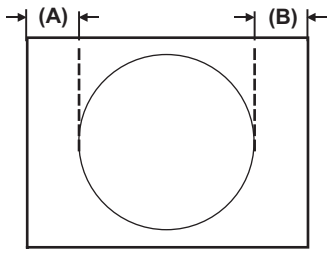
Fig.1</td></tr>
<tr><td>H. POSITION</td><td>Signal generator<br><br>Remote control unit</td><td></td><td>[3. DEF]<br>2. HOR. POSITION</td><td rowspan="2">(1) Receive a circle pattern signal.<br>(2) Select 3. DEF from the SERVICE MENU.<br>(3) Select < 2. HOR. POSITION >.<br>(4) Set the initial setting value of < 2. HOR. POSITION >.<br>(5) Adjust <2.HOR. POSITION> to be equal the width of (A) and (B) as shown in Fig.2.</td></tr>
<tr><td colspan="4"> 

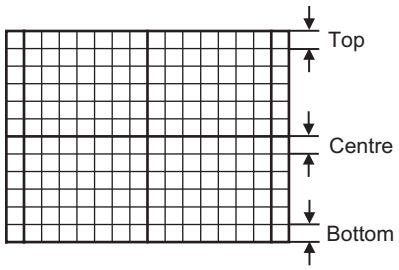
Fig.2</td></tr>
<tr><td>V.LINEARITY /<br>V.S-CURVE</td><td>Signal generator<br><br>Remote control unit</td><td></td><td>[3. DEF]<br>4. VER. LIN.<br>5. VER. SCURVE</td><td rowspan="2">• If the vertical linearity is noticeably deteriorated, perform the following steps.<br>(1) Receive a crosshatch signal.<br>(2) Select 3. DEF from the SERVICE MENU.<br>(3) Select < 4. VER. LIN. >.<br>(4) Set the initial setting value of < 4. VER. LIN. >.<br>(5) Select < 5. VER. SCURVE >.<br>(6) Set the initial setting value of < 5. VER. SCURVE >.<br>(7) Adjust < 4. VER. LIN. > and < 5. VER. SCURVE > so that the space of upper and lower lines as shown in Fig.3 on TOP, CENTRE and BOTTOM become uniform.</td></tr>
<tr><td colspan="4"> 

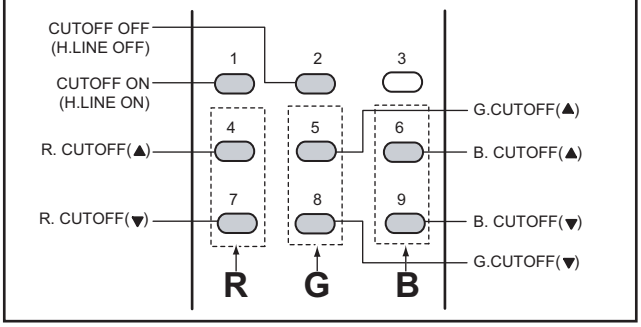
Fig.3</td></tr>
</table>

### 4.8.5 VIDEO CIRCUIT

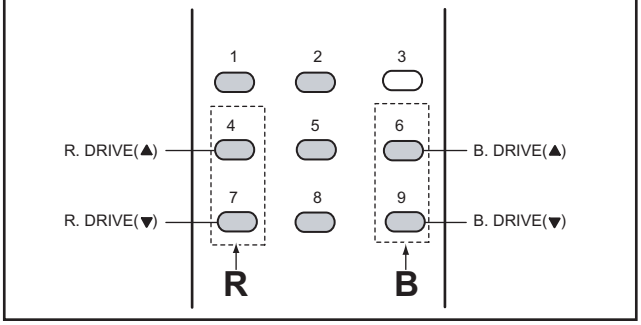
**The setting (adjustment) using the REMOTE CONTROL UNIT is made on the basis of the initial setting values. The setting values which adjust the screen to the optimum condition can be different from the initial setting values. Do not change the initial setting values of the setting items not listed in "ADJUSTMENT PROCEDURE".**

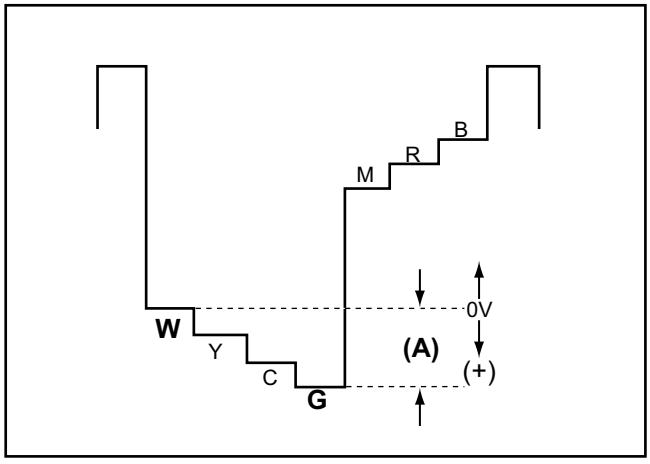
| Item | Measuring instrument | Test point | Adjustment part | Description |
|---|---|---|---|---|
| **WHITE BALANCE (LOW LIGHT)** | Signal generator<br><br>Remote control unit | | [2.V/C]<br>1. CUT OFF (R)<br>1. CUT OFF (G)<br>1. CUT OFF (B)<br><br>SCREEN VR<br>[IN HVT] | (1) Receive a black and white signal (colour off).<br>(2) Select 2. V/C from the SERVICE MENU.<br>(3) Select **< 1. CUT OFF >**.<br>(4) Set the initial setting value of **< 1. CUT OFF >**.<br>(5) Press the **[1]** key to show the single horizontal line on screen.<br>(6) Turn the SCREEN VR fully counter-clockwise, then slowly turn it clockwise to where one of a red, blue or green colour is faintly visible.<br>(7) Adjust the two colors which did not appear until the single horizontal line that is displayed becomes white using the **[4]** to **[9]** keys.<br>(8) Turn the SCREEN VR to where the single horizontal line glows faintly.<br>(9) Press the **[2]** key to turn off the single horizontal line.<br>(10) Press the **[DISPLAY]** key twice to return to the normal screen. |
| | | | | |
| **WHITE BALANCE (HIGH LIGHT)** | Signal generator<br><br>Remote control unit | | [2.V/C]<br>2. DRIVE (R)<br>2. DRIVE (B) | (1) Receive a black and white signal (colour off).<br>(2) Select 2. V/C from the SERVICE MENU.<br>(3) Select **< 2. DRIVE >**.<br>(4) Set the initial setting value of **< 2. DRIVE >**.<br>(5) Adjust the screen until it becomes white using the **[4]**, **[6]**, **[7]** and **[9]** keys.<br>(6) Press the **[DISPLAY]** key twice to return to the nomal screen. |
| | | | | |
| **SUB BRIGHT** | Remote control unit | | [2. V/C]<br>3. BRIGHT | (1) Receive any broadcast.<br>(2) Select 2. V/C from the SERVICE MENU.<br>(3) Select **< 3. BRIGHT >**.<br>(4) Set the initial setting value of **< 3. BRIGHT >**.<br>(5) If the brightness is not the best with the initial setting value, make fine adjustment until you get the best brightness. |
| **SUB CONTRAST** | Remote control unit | | [2. V/C]<br>4. CONT. | (1) Receive any broadcast.<br>(2) Select 2. V/C from the SERVICE MENU.<br>(3) Select **< 4. CONT >**.<br>(4) Set the initial setting value of **< 4. CONT >**.<br>(5) If the contrast is not the best with the initial setting value, make fine adjustment until you get the best contrast. |

**KEY ASSIGNMENT OF REMOTE CONTROL UNIT**

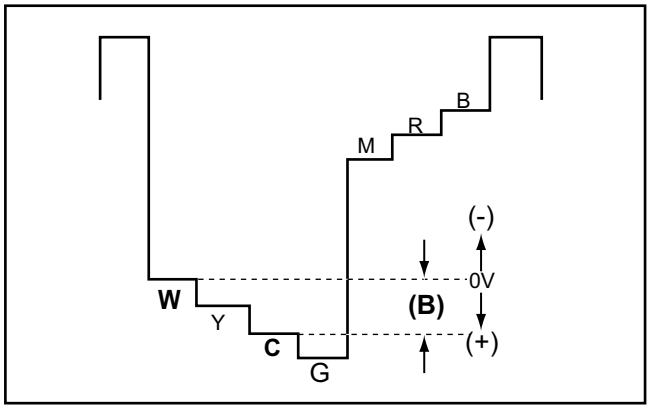


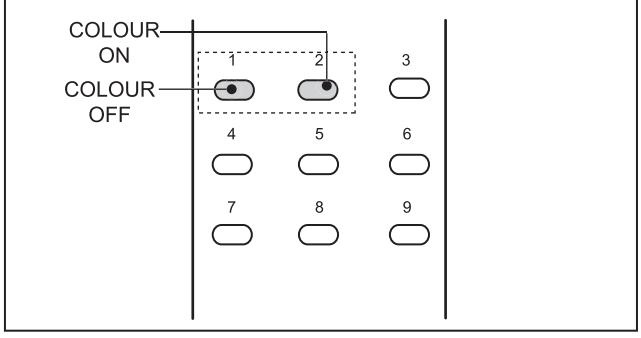

**KEY ASSIGNMENT OF REMOTE CONTROL UNIT**



<table>
<tr><th>Item</th><th>Measuring instrument</th><th>Test point</th><th>Adjustment part</th><th>Description</th></tr>
<tr><td rowspan="2">SUB COLOUR</td><td>Remote control unit</td><td></td><td>[2. V/C]<br>5. COLOUR<br>(PAL / SECAM / NTSC)</td><td rowspan="2">[Method of adjustment without measuring instrument]<br>PAL COLOUR<br>(1) Receive a PAL broadcast.<br>(2) Select 2. V/C from the SERVICE MENU.<br>(3) Select < 5. COLOUR >.<br>(4) Set the initial setting value of < 5. COLOUR >.<br>(5) If the colour is not the best with the initial setting value, make fine adjustment until you get the best colour.<br>SECAM COLOUR<br>(1) Receive a SECAM broadcast.<br>(2) Make fine adjustment of SECAM COLOUR as previously.<br>NTSC 3.58 COLOUR<br>(1) Receive a NTSC 3.58MHz broadcast.<br>(2) Make similar fine adjustment of NTSC 3.58 COLOUR as previously.<br>NTSC 4.43 COLOUR<br>(1) When NTSC 3.58 adjustment completed, NTSC 4.43 will be automatically set at the respective values.</td></tr>
<tr><td>Signal generator<br><br>Oscilloscope<br><br>Remote control unit</td><td>TP-47G/R<br>TP-E<br>[CRT SOCKET PWB]</td><td>[2. V/C]<br>5. COLOUR<br>(PAL / SECAM / NTSC)</td></tr>
<tr><td colspan="4"> 

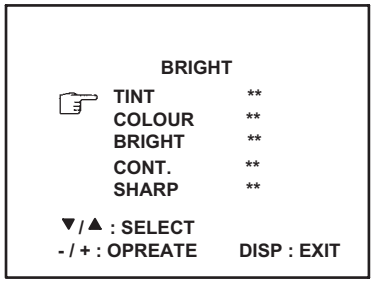
<table>
<tr><th rowspan="2">MODEL</th><th colspan="4">Voltage setting (A)</th></tr>
<tr><th>PAL</th><th>SECAM</th><th>NTSC3.58</th><th>NTSC4.43</th></tr>
<tr><td>AV-14AG16/U</td><td>+10V</td><td>+10V</td><td>+10V (RF)</td><td>---</td></tr>
</table></td><td>[Method of adjustment using measuring instrument]<br>PAL COLOUR<br>(1) Receive a PAL full field colour bar signal (75% white).<br>(2) Select 2. V/C from the SERVICE MENU.<br>(3) Select < 5. COLOUR >.<br>(4) Set the initial setting value of < 5. COLOUR >.<br>(5) Connect the oscilloscope to TP-47G/R and TP-E.<br>(6) Adjust PAL COLOUR to bring the value of (A) in the voltage table.<br>SECAM COLOUR<br>(1) Receive a SECAM full field colour bar signal (75% white).<br>(2) Set the initial setting value of SECAM COLOUR .<br>(3) Adjust SECAM COLOUR to bring the value of (A) in the voltage table.<br>NTSC 3.58 COLOUR<br>(1) Receive a NTSC 3.58 full field colour bar signal (75% white).<br>(2) Set the initial setting value of NTSC 3.58 COLOUR.<br>(3) Adjust NTSC 3.58 COLOUR to bring the value of (A) in the voltage table.<br>NTSC 4.43 COLOUR<br>(1) When NTSC 3.58 is set, NTSC 4.43 will be automatically set at the respective values.</td></tr>
</table>

<table>
<tr><th>Item</th><th>Measuring instrument</th><th>Test point</th><th>Adjustment part</th><th>Description</th></tr>
<tr><td rowspan="2">SUB TINT</td><td>Signal generator<br><br>Remote control unit</td><td></td><td>[2. V/C]<br>6. TINT</td><td>[Method of adjustment without measuring instrument]<br>NTSC 3.58 TINT<br>(1) Receive a NTSC 3.58 full field colour bar signal (75% white).<br>(2) Select 2. V/C from the SERVICE MENU.<br>(3) Select < 6. TINT >.<br>(4) Set the initial setting value of < 6. TINT >.<br>(5) If you cannot get the best tint with the initial setting value, make fine adjustment until you get the best tint.<br>NTSC 4.43 TINT<br>(1) When NTSC 3.58 is set, NTSC 4.43 will be automatically set at the respective values.</td></tr>
<tr><td>Signal generator<br><br>Oscilloscope<br><br>Remote control unit</td><td>TP-47G/R<br>TP-E<br>[CRT SOCKET PWB]</td><td>[2. V/C]<br>6. TINT</td><td rowspan="2">[Method of adjustment using measuring instrument]<br>NTSC 3.58 TINT<br>(1) Receive a NTSC 3.58 full field colour bar signal (75% white).<br>(2) Select 2. V/C from the SERVICE MENU.<br>(3) Select < 6. TINT >.<br>(4) Set the initial setting value of < 6. TINT >.<br>(5) Connect the oscilloscope to TP-47G/R and TP-E.<br>(6) Adjust NTSC 3.58 TINT to bring the value of (B) in the voltage table in the left.<br>NTSC 4.43 TINT<br>(1) When NTSC 3.58 is set, NTSC 4.43 will be automatically set at the respective values.</td></tr>
<tr><td colspan="3"> 

<table>
<tr><th rowspan="2">MODEL</th><th colspan="2">Voltage setting (B)</th></tr>
<tr><th>NTSC3.58</th><th>NTSC4.43</th></tr>
<tr><td>AV-14AG16/U</td><td>+7V (RF)</td><td>---</td></tr>
</table></td></tr>
<tr><td>SECAM BLACK OFFSET</td><td>Signal generator<br><br>Remote control unit</td><td></td><td>[2. V/C]<br>7. SECAM BL ADJUST</td><td>(1) Input a SECAM full field colour bar signal.<br>(2) Select 2. V/C from the SERVICE MENU.<br>(3) Select < 7. SECAM BL ADJUST >.<br>(4) Set the initial setting value of < 7. SECAM BL ADJUST >.<br>(5) Switch the [1] key (colour OFF) and [2] key (colour ON) and make sure that there is no colour on the black and white screen.<br>(6) If the black and white screen is not best with the initial setting value, make fine adjustment until you get the best black and white screen.<br>(7) While watching the screen, adjust the value to be the same colour between ON & OFF by [1] or [2] key.<br>(8) Press the [DISPLAY] key twice to return to the normal screen.</td></tr>
<tr><td colspan="3">KEY ASSIGNMENT OF REMOTE CONTROL UNIT<br> 
</td></tr>
</table>

#### 4.8.6 VSM PRESET SETTING

| Item | Measuring instrument | Test point | Adjustment part | Description |
|---|---|---|---|---|
| **VSM PRESET** | Remote control unit | | [4. VSM PRESET]<br>TINT<br>COLOUR<br>BRIGHT<br>CONT.<br>SHARP | (1) Select 4. VSM PRESET from the SERVICE MENU.<br>(2) Set the PICTURE MODE to BRIGHT.<br>(3) Select **< TINT >**.<br>(4) Set the initial setting value of **< TINT >** as shown in the below table.<br>(5) Select **< COLOUR >** to **< SHARP >** in turn, and set the values.<br>(6) Respectively select the **"SOFT"** and **"STANDARD"**. Make similar adjustment as same step as above. |




**● VSM PRESET**

| Setting item | BRIGHT | STANDARD | SOFT |
|---|---|---|---|
| TINT | 15 | ← | ← |
| COLOUR | 15 | ← | ← |
| BRIGHT | 15 | ← | ← |
| CONT. | 30 | 15 | 13 |
| SHARP | 15 | ← | 12 |

# SECTION 5
# TROUBLESHOOTING

This service manual does not describe TROUBLESHOOTING.

JVC
Victor Company of Japan, Limited
CRT Display Category 12, 3-chome, Moriya-cho, Kanagawa-ku, Yokohama-city, Kanagawa-prefecture, 221-8528, Japan

(No.YA392)

Printed in Japan
VPT

JVC

# COLOUR TELEVISION

# *INSTRUCTIONS*

Thank you for buying this JVC colour television.
To make sure you understand how to use your new TV, please read this manual thoroughly before you begin.

***AV-14AG16***
***AV-14FMG6B***
***AV-21BMG6***
***AV-21CG16***
***AV-21DMG6***
***AV-21FMG6***
***AV-21FMG6B***
***AV-21TG16***
***AV-21YMG6***

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GGT0109-001A-H
0206-NIC-JMT



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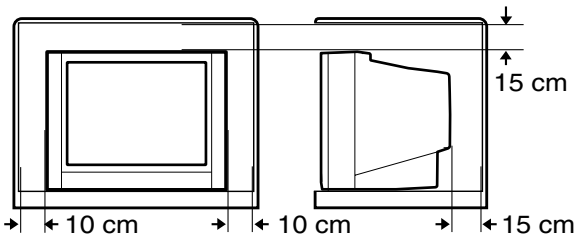
# Safety precautions

## WARNING

**• To prevent fire or shock hazard, do not expose the TV to rain or moisture.**

### CAUTION

- Operate only from the power source indicated on the rear of the TV.
- Avoid damaging the power cord and mains plug. When you unplug the TV, pull it out by the mains plug. Do not pull on the power cord.
- Never block or cover the cabinet openings for ventilation. Never install the TV where good ventilation is unattainable. When installing this TV, leave spaces for ventilation around the TV more than the minimum distances shown in the diagram.

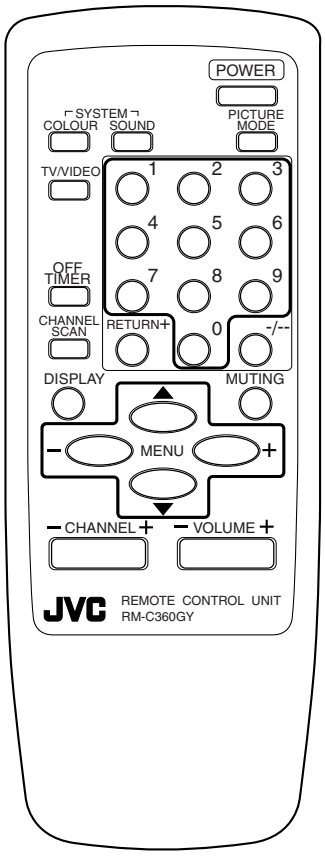



- Do not allow objects or liquid into the cabinet openings.
- In the event of a fault, unplug the TV and call a service technician. Do not attempt to repair it by yourself or remove the rear cover.
- The surface of the TV screen is easily damaged. Be very careful with it when handling the TV. Should the TV screen become soiled, wipe it with a soft dry cloth. Never rub it forcefully. Never use any cleaner or detergent on it.
- This TV can be turned on/ off power by connecting/ disconnecting the AC Plug into AC outlet. While this TV is being installed, enough space should be reserved for connecting/ disconnecting the AC Plug into AC outlet by hand.

# Preparation

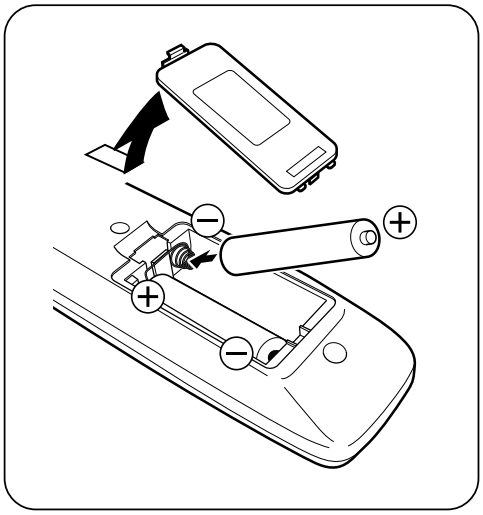
## 1 Confirm which remote control you have

***RM-C360GY***




## 2 Inserting the batteries

Correctly insert two batteries, observing the ⊕ and ⊖ polarities and inserting the ⊖ end first.



**CAUTION:**
Follow the cautions printed on the batteries.

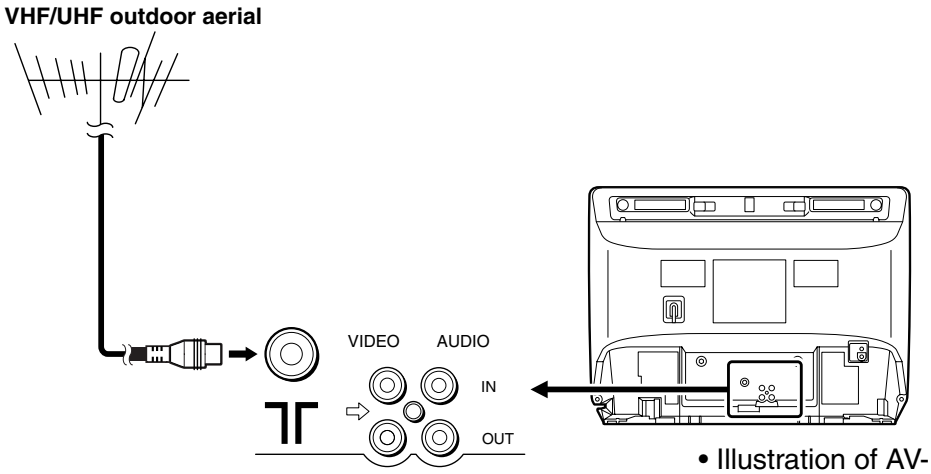
**Notes:**
- Use AA/R6/UM-3 dry cell batteries.
- If the remote control does not work properly, fit new batteries.
  The supplied batteries are for testing, not regular use.

# 3 Connecting the aerial and external devices

- For further details, refer to the manuals provided with the devices you are connecting.
- Connecting cables are not supplied.
- The front and rear AUDIO/VIDEO input jacks are directly connected so that input to either jack is output through both. You cannot provide input to both the front and rear jacks at the same time. Disconnect one input, or use one of the jacks as an output jack only (for monitoring or recording).

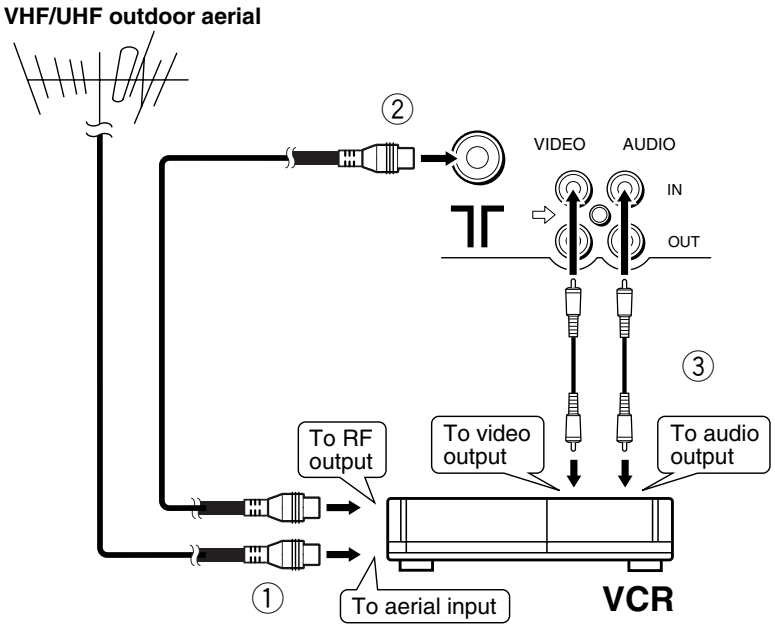
## ■ Connecting the aerial and VCR

### Connecting the aerial



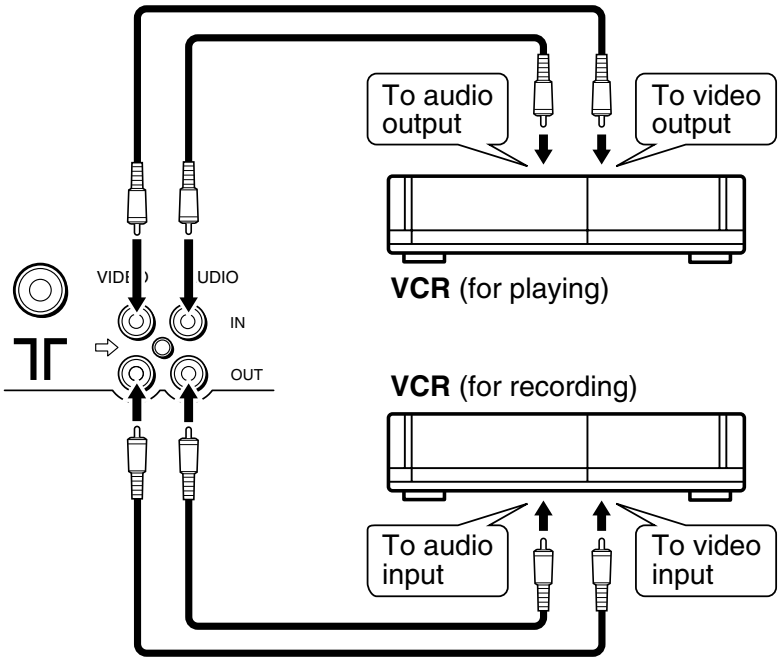

• Illustration of AV-14FMG6B.

### Connecting the aerial and VCR

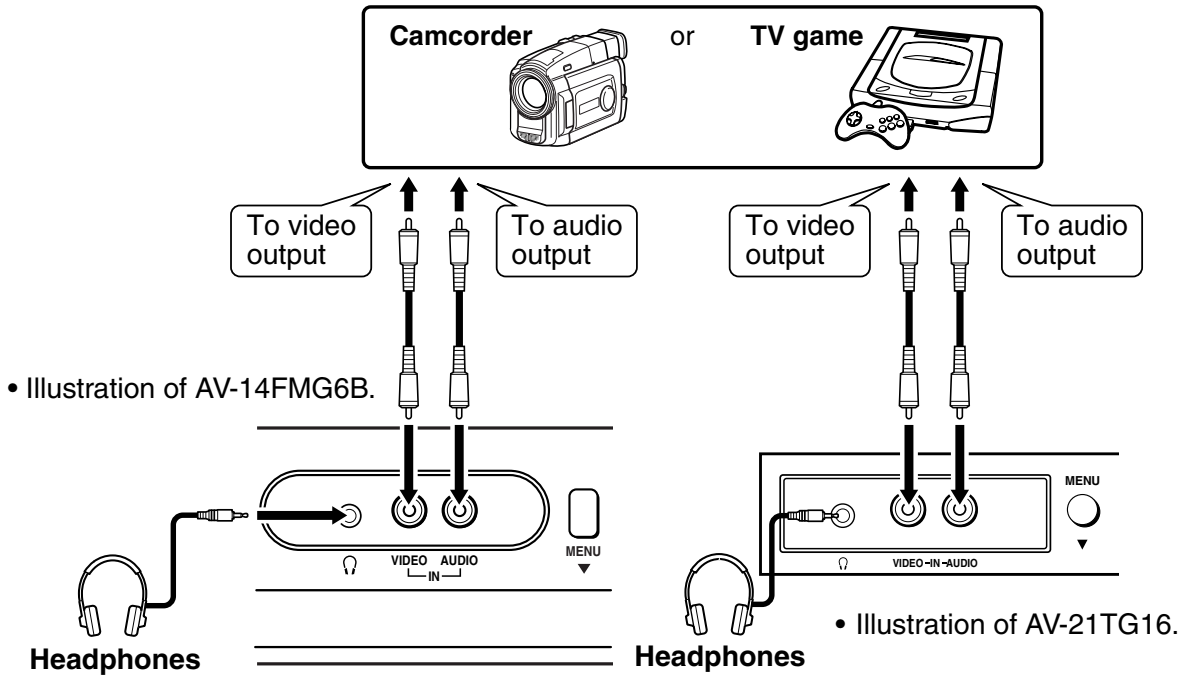



• Illustration of AV-14FMG6B.

## ■ Connecting other external devices




• Illustration of AV-14FMG6B.




• Use the headphones with a stereo mini jack (3.5 mm in diameter). When you connect the headphones, the TV speakers go off.

# 4 Connecting the power cord

Connect the power cord to the AC outlet.
Operate only from the power source indicated on the rear of the TV.

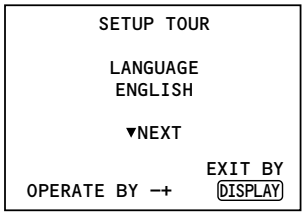
# 5 SETUP TOUR

When the TV is first turned on it enters the SETUP TOUR mode, and the JVC logo is displayed. Follow the instructions on the on-screen display to perform the SETUP TOUR.

- In case of resetting that the reason for such as removal, you can set the SETUP TOUR function on the "MENU 3" menu. For details, see page 13.

## 1 Press the Main power button on the TV.

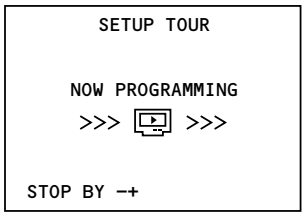
The POWER lamp or POWER/ON TIMER lamp lights. After the JVC logo has been displayed, the TV automatically switches to the language setting mode.




## 2 Press the MENU –/+ buttons to select the on-screen language.

## 3 Press the MENU ▼ button.

The AUTO PROGRAMMING function will start and the indicator blinks.

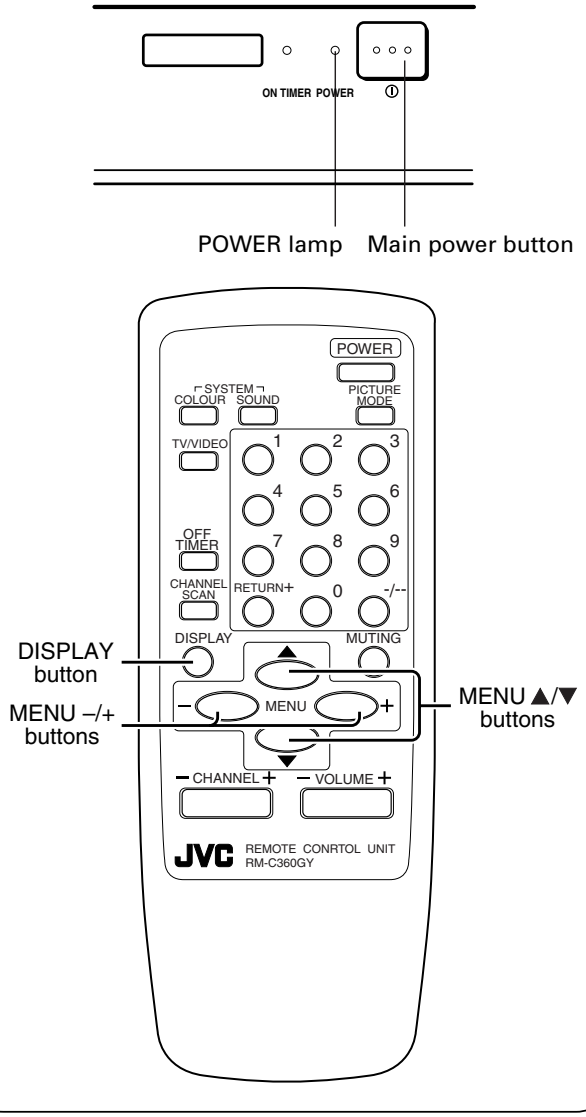



- To stop the AUTO PROGRAMMING function, press the MENU –/+ buttons. When you press stop, it will display "SETUP TOUR THANK YOU!".

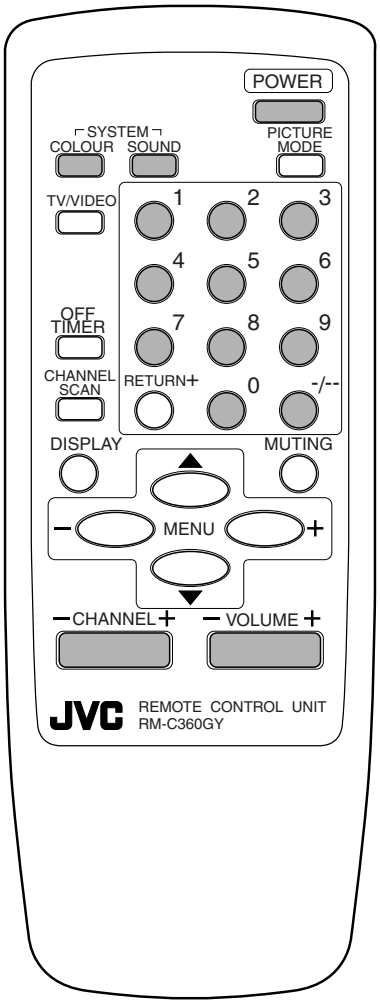
When all the TV channels that can be received on your TV have been preset, the display goes out and the AUTO PROGRAMMING function operation is completed.

- If a TV channel you want to view is not set to the channel, set it with the MANUAL CH PRESET function. For details, see page 14.

• Illustration of AV-21FMG6



# Basic operation




## 1 Press the POWER button to turn your TV on.

- If your TV does not turn on, press the Main power button on the TV then press the POWER button again.
- You can also turn on your TV by pressing any of the following buttons;
  - the CHANNEL –/+ button
  - the Number buttons
  - the TV/VIDEO button

## 2 Select a channel.

■ Press the CHANNEL –/+ button.

- Up/down selection cannot be selected for channels to which the SKIP has been set to “YES”. See page 15.

■ Press the Number buttons to enter the channel number.

- If you want to enter a two-digit number, press the -/-- button to select the two digit mode “--”, then enter the channel number.

## 3 Press the VOLUME –/+ button to adjust the sound.

## 4 To turn your TV off, press the POWER button.

- We recommend that you press the Main power button on the TV to turn the main power off if you do not plan to use your TV for a long time or if you wish to save energy.

**If the picture is not clear:**
Press the COLOUR SYSTEM button to select another colour system, see page 8.

**If the sound is not clear:**
Press the SOUND SYSTEM button to select another sound system, see page 8.

**Viewing Images from an External Device:**
Press the TV/VIDEO button to select the VIDEO mode.

- You can also use the INPUT function to select the VIDEO mode. For details, refer to page 11.

# Remote control buttons and functions

## PICTURE MODE button

You can select one of three picture adjustment settings as you like.

**Press this button to select a mode.**

**BRIGHT:**
Heightens contrast and sharpness.

**STANDARD:**
Standardizes picture adjustments.

**SOFT:**
Softens contrast and sharpness.

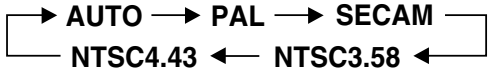
- Pressing this button returns all the picture settings in the "MENU 4" to their default settings.

## COLOUR SYSTEM button

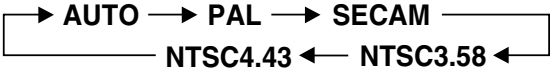
If the picture is not clear or no colour appears, change the current colour system to another colour system.

**Press this button to select the colour system.**

**In TV mode (channel 1 to 99 and AV):**




**In VIDEO mode:**



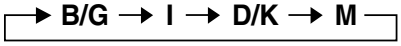

**AUTO:**
Automatic colour system selection.

- For the colour systems in each country or region, see the table"Broadcasting systems" on page 19.
- If the picture is not normal in the AUTO mode, change the AUTO mode to another colour system.

## SOUND SYSTEM button

If the sound is not clear even when the picture appears normal, change the current sound system to another sound system.

**Press this button to select the sound system.**




- For the sound systems in each country or region, see the table "Broadcasting systems" on page 19.
- You cannot select any sound system when in a VIDEO mode.

## DISPLAY button

You can continuously display the current channel number or VIDEO mode on the screen.

**Press this button.**

To turn the display off, press this button again.

- When selecting a channel or VIDEO mode with no input signal, indication of selected channel or VIDEO mode becomes fixed on the screen.

## RETURN + button

You can set a channel you frequently view to the Return Channel and you can view that channel at any time with one-touch.

**To set the channel to the Return Channel:**

**1 Select the channel you want to set to the Return Channel.**

**2 Press this button and hold until the message "RETURN PLUS PROGRAMMED!" appears.**

- When you turn off the TV, the Return Channel setting is cancelled.

**To view the Return Channel:**
Press this button.

- You can view two channels (current channel and Return Channel) alternately by pressing this button.

**To cancel the Return Channel setting:**
Press this button and hold until the message"RETURN PLUS CANCELLED!" appears.

**If no channel is set to the Return Channel:**
You can view the channel selected right before the current channel by pressing this button.

## CHANNEL SCAN button

You can quickly view all TV channels programmes that you can view on your TV, and search for the programme you want to view.

**1 Press this button to start scanning TV channels.**

The TV channel programmes are each displayed for several seconds.

- The programmes of TV channels for which the SKIP function is set to "YES" are not displayed. (See page 15.)

**2 When you find the programme you want to view, press this button again to stop scanning.**

## MUTING button

You can turn the sound off instantly.

**Press this button.**

To turn the sound on, press this button again.

## OFF TIMER button

You can set the TV to automatically turn off after a set time.

**Press this button to select the period of time.**

- You can set the period of time to a maximum of 120 minutes in 10 minute increments.
- 1 minute before the OFF TIMER function turns off the TV, "GOOD NIGHT!" appears.

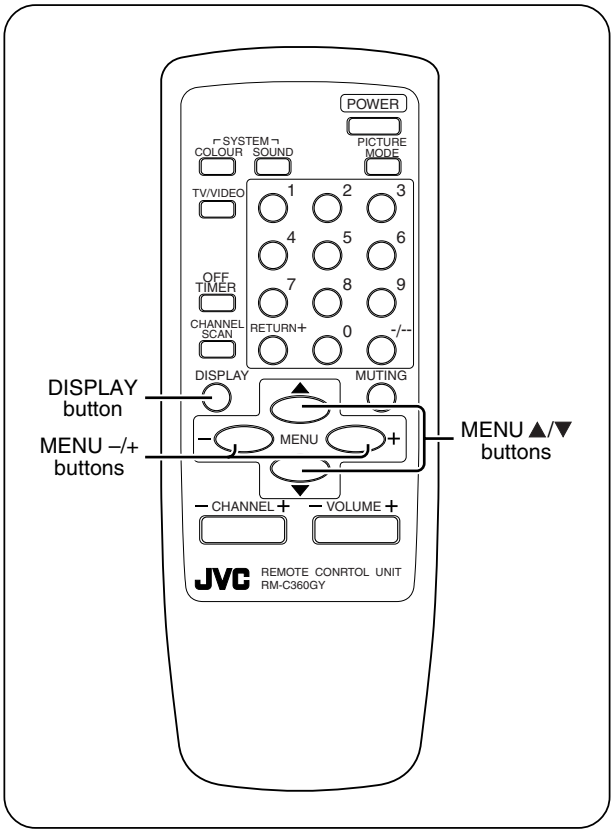
To display the remaining time, press this button once.

To cancel the OFF TIMER function, press this button to set the period of time to 0.

- The OFF TIMER function will not turn off the TV's main power.

# Using the TV's menus

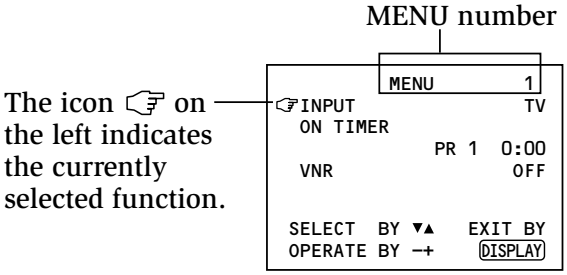
This TV has a number of functions you can operate using the menus. To use all your TV's functions fully, you need to understand how to use the menus.




## ■ Basic operation

### 1 Press the MENU ▲/▼ buttons.

One of the 4 menus is displayed.



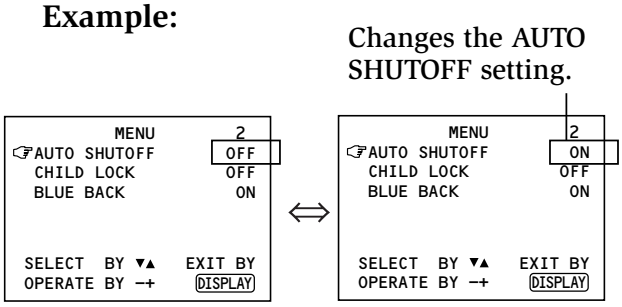

### 2 Repeatedly press the MENU ▲/▼ buttons to display a desired menu.

- If you hold down the ▼ button, the next menu is displayed.
- If the selected function is on the first line, pressing the ▲ button displays the preceding menu.

### 3 Repeatedly press the MENU ▲/▼ buttons to select a desired function.

### 4 Press the MENU –/+ buttons to change function settings.

**Example:**




- With some functions, the operation method may differ.

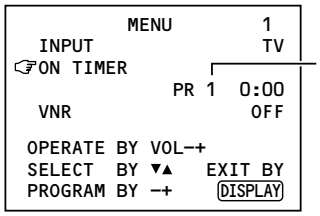
### 5 Press the DISPLAY button to turn the display off.

- To operate a menu using the buttons on the front panel of the TV, refer to "Operating menus" on page 17.

## ON TIMER

Your TV will automatically turn on and tune into the channel you set after the period of time you set.

**1 Press MENU ▲/▼ to display the "MENU 1" menu, then select "ON TIMER".**




**2 Press MENU –/+ to select a channel you want to view when the TV turns on.**

**3 Press VOLUME –/+ to select the period of time after which you want to turn on the TV.**

The ON TIMER function starts.

- Each time you press the button, the period of time changes in 15 minute intervals (up to 12 hours).

To cancel the ON TIMER function, press the VOLUME –/+ button to set the period of time to "0:00".

**4 Press DISPLAY to turn the display off.**

- If you turn off the TV's main power by pressing the Main power button, the ON TIMER function is canceled.
- If you do not turn off the TV after starting the ON TIMER function, the channel will automatically switch to the channel set for the ON TIMER function.

**When the time set for the ON TIMER function is reached:**

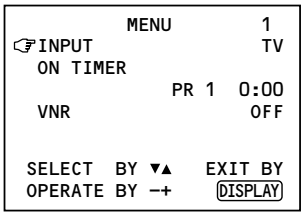
The TV automatically turns on and the channel set for the ON TIMER function is displayed.

- For safety reasons the TV will automatically turn off if no operations are made within approximately two hours after the TV is turned on with the ON TIMER function.
- The OFF TIMER function and AUTO SHUTOFF function have priority over the ON TIMER function.

## INPUT

You can view images from VCRs or other devices connected to your TV.

**1 Press MENU ▲/▼ to display the "MENU 1" menu, then select "INPUT".**



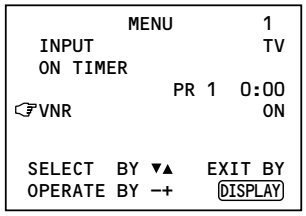

**2 Press MENU –/+ to select the VIDEO mode.**

While you press MENU –/+, it will switch to TV mode and VIDEO mode alternately.

## VNR (Video Noise Reduction)

You can reduce the picture noise.

**1 Press MENU ▲/▼ to display the "MENU 1" menu, then select "VNR".**



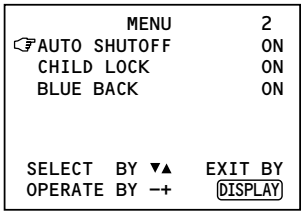

**2 Press MENU –/+ to select "ON".**

To cancel the VNR function, select "OFF".

## AUTO SHUTOFF

You can set your TV to turn off if no signals are received for about 15 minutes or longer after the end of a broadcast.

**1 Press MENU ▲/▼ to display the "MENU 2" menu, then select "AUTO SHUTOFF".**




**2 Press MENU –/+ to select "ON".**

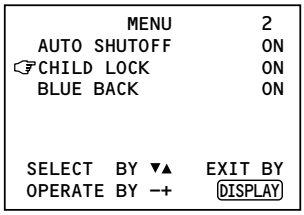
To cancel the AUTO SHUTOFF function, select "OFF".

- The AUTO SHUTOFF function does not turn off the TV's main power.
- The AUTO SHUTOFF will not work for a VIDEO mode.

## CHILD LOCK

You can disable the front control buttons of the TV.
When this function is set to "ON", the TV can be operated using only the remote control.
Use this function to prevent children from operating the TV without parental consent.

**1 Press MENU ▲/▼ to display the "MENU 2" menu, then select "CHILD LOCK".**




**2 Press MENU –/+ to select "ON".**

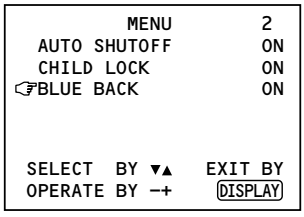
To cancel the CHILD LOCK function, select "OFF".

- The CHILD LOCK function is canceled when you turn the power off.

## BLUE BACK

You can mute the sound and change the picture into a blue screen while no signals are received by the TV, or when the signals are unstable.

**1 Press MENU ▲/▼ to display the "MENU 2" menu, then select "BLUE BACK".**




**2 Press MENU –/+ to select "ON".**

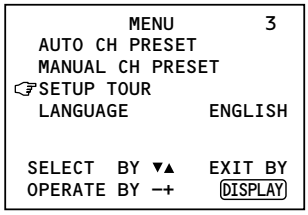
To cancel the BLUE BACK function, select "OFF".

- To view a broadcast even when the reception signal is poor, set the BLUE BACK function to "OFF".
- Even when the BLUE BACK function is set to "OFF", the sound may not be audible.

## SETUP TOUR

You can start the SETUP TOUR function.

**1 Press MENU ▲/▼ to display the "MENU 3" menu, then select "SETUP TOUR".**



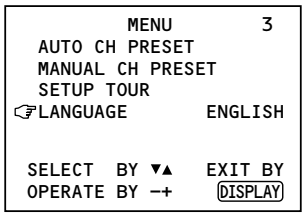

**2 Press MENU –/+.**

JVC logo is appear and the SETUP TOUR function will start.
For details, see page 6.

## LANGUAGE

You can select the language for the on-screen display.

**1 Press MENU ▲/▼ to display the "MENU 3" menu, then select "LANGUAGE".**



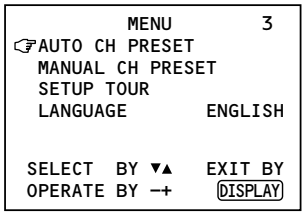

**2 Press MENU –/+ to select language.**

The on-screen display indications are in the selected language.

## AUTO CH PRESET

You can automatically preset all TV channels that can be received by your TV to channels.

**1 Press MENU ▲/▼ to display the "MENU 3" menu, then select "AUTO CH PRESET".**




**2 Press MENU –/+ to start the AUTO CH PRESET function.**

" >>> ON SEARCH" is displayed on the screen.

When all the TV channels that can be received on your TV have been preset, the display goes out and the AUTO CH PRESET function operation is completed.

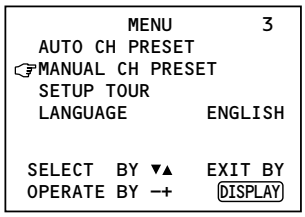
**To stop the AUTO CH PRESET:**
Press the MENU –/+ buttons.

- The AUTO CH PRESET function does not preset a TV channel to the AV channel (channel number 0).
- If the TV cannot preset the TV channel you want to view, preset it manually. For details, see "MANUAL CH PRESET" on page 14.

## MANUAL CH PRESET

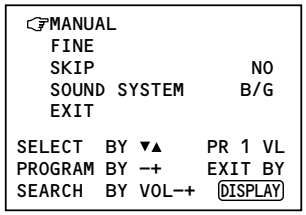
You can manually preset desired TV channels to desired channels.

**1 Press MENU ▲/▼ to display the "MENU 3" menu, then select "MANUAL CH PRESET".**




**2 Press MENU –/+.**

The sub-menu is displayed.




- The channel number is displayed as a PR number. For example, channel 1 will be displayed as PR 1. However, the AV channel will be displayed as AV.

**3 Press MENU –/+ to select the channel number.**

**4 Press VOLUME –/+ to start searching for the TV channel.**

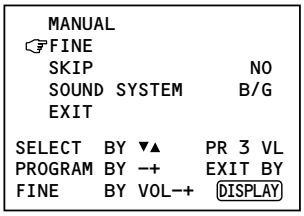
" >>> " or " <<< " is displayed on the screen.

When the TV finds a TV channel, the " >>> " or " <<< " display goes out, and the TV channel is preset to the currently selected channel number.

- If the TV channel you want to preset is not displayed, repeat step 4 until the TV finds the TV channel you want to preset.
- To stop the MANUAL CH PRESET function, press any button other than the VOLUME –/+ button.

**If the picture is not clear:**
Fine-tune the TV channel.

**1** Press MENU ▲/▼ to select "FINE".

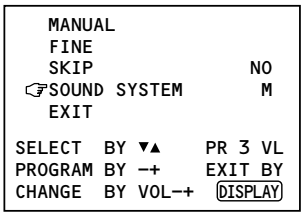



**2** Hold VOLUME –/+ down to fine-tune the TV channel so that the best image is displayed on screen.

" > " or " < " indicates that the TV is fine-tuning the TV channel.

**If the sound is not clear:**

**1** Press MENU ▲/▼ to select "SOUND SYSTEM".




**2** Press VOLUME –/+ to select the appropriate sound system.

- For the sound systems in each country or region, refer to the table "Broadcasting systems" on page 19.

**5 Press MENU ▲/▼ to select "MANUAL".**

**6 Repeat steps 3 to 5 if you want to preset another TV channel to a channel.**

## SKIP

You can set undesired channels to be skipped. Channels set to be skipped cannot be selected by the CHANNEL –/+ buttons nor the CHANNEL SCAN button.

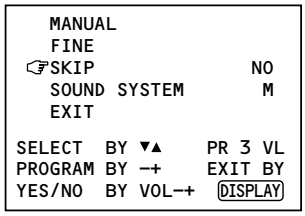
- Channels to which TV channels have not been preset are automatically set to be skipped.

**1 Press MENU ▲/▼ to display the "MENU 3" menu, then select "MANUAL CH PRESET".**

**2 Press MENU –/+.**

The sub-menu is displayed.

**3 Press MENU ▲/▼ to select "SKIP".**




**4 Press MENU –/+ to select the channel you want to skip.**

**5 Press VOLUME –/+ to select "YES".**

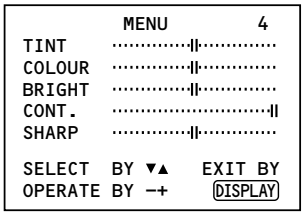
The channel is set to be skipped.
To cancel the SKIP function, select "NO".

**6 Repeat steps 4 and 5 if you want to set another channel to skip.**

## Picture Adjustments

You can adjust the picture as you like.

**1 Press MENU ▲/▼ to display the "MENU 4" menu.**




**2 Press MENU ▲/▼ to select an item and press MENU –/+ to adjust it.**

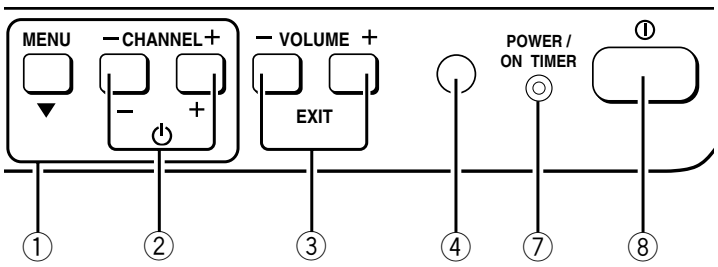
| | | |
|---|---|---|
| **TINT*** | - : Reddish | + : Greenish |
| **COLOUR** | - : Lighter | + : Deeper |
| **BRIGHT** | - : Darker | + : Brighter |
| **CONT.** | - : Lower | + : Higher |
| **SHARP** | - : Softer | + : Sharper |

* TINT (tint) is displayed only when viewing images from NTSC3.58 or NTSC4.43 colour systems.

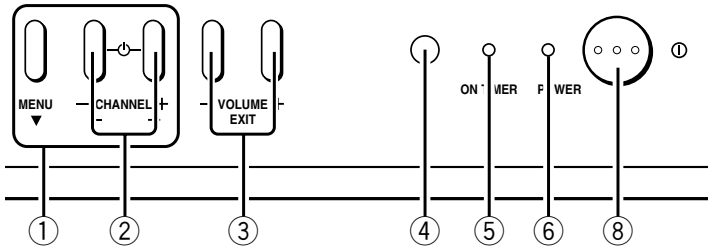
# Using the buttons on the TV

The following illustrations are of only some models are shown for explanation purpose only. Your TV may not be exactly the same as illustrated.

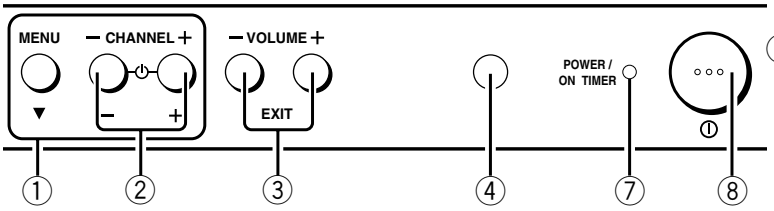
<AV-14AG16>



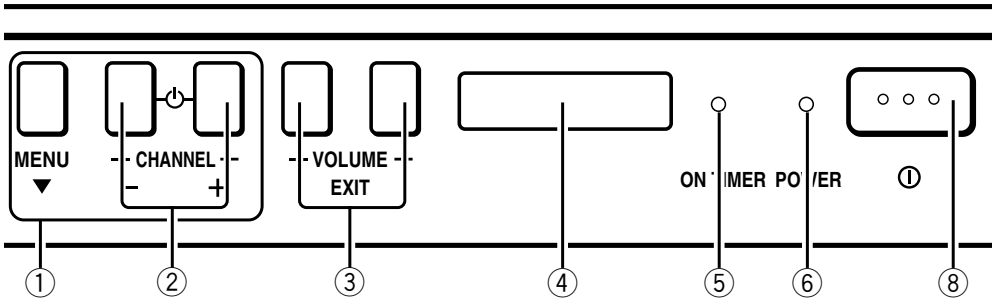

<AV-21YMG6>



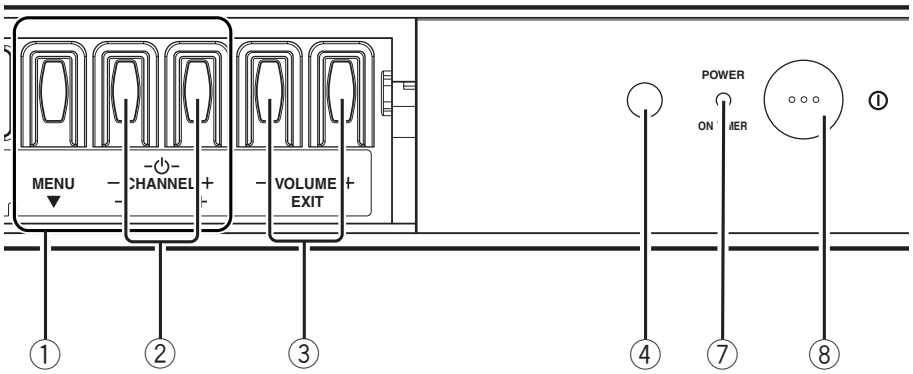

<AV-21TG16>




<AV-21FMG6, AV21FMG6B>




<AV-21BMG6>




① MENU button
- MENU ▼ button

② CHANNEL –/+ buttons
- MENU –/+ buttons

③ VOLUME –/+ buttons
- EXIT from MENU buttons

④ Remote control sensor

⑤ ON TIMER lamp
The light is switched on while ON TIMER function is operating.

⑥ POWER lamp
When the Main power is on, the light is red.

⑦ POWER/ON TIMER lamp
When the Main power is on, the light is green.
When ON TIMER function is on, it is red.

⑧ Main power button

## Basic operation

• Check to make sure the CHILD LOCK function is set to “OFF”. When the CHILD LOCK function is set to “ON”, the TV cannot be operated using the front control buttons. For details, see “CHILD LOCK” on page 12.

**1 Press CHANNEL –/+ to turn the TV on from standby mode.**

**2 Press CHANNEL –/+ to select a channel.**

**3 Press VOLUME –/+ to adjust the volume.**

**4 To turn your TV off, press the Main power button to turn off the TV’s main power.**

**To change the TV mode to the VIDEO mode:**

• Select the VIDEO mode with the INPUT function in “MENU 1”.

## Operating menus

You can operate functions in menus using the front control buttons on the TV.

**1 Press MENU ▼ to display a menu.**

**2 Press MENU ▼ repeatedly to display the menu you want to use.**

**3 Press MENU ▼ to select the desired function or item.**

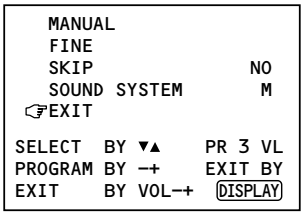
**4 Press MENU –/+ or VOLUME –/+ to carry out the desired operation.**

For details, see the description for each function.

**5 Press VOLUME –/+ to turn the menu display off.**

**To turn the sub-menu display off:**

**1** Press MENU ▼ to select “EXIT”.




**2** Press VOLUME –/+ to turn the display off.

# Troubleshooting

If there is no picture or the TV does not operate normally, make sure the problem isn't due to the reasons indicated below.
If the problem persists even after taking the measures indicated, please contact a service technician.

### Cannot turn the TV on

- Press the Main power button on the TV.
- Connect the power cord to the AC outlet.

### The screen turns blue

- Is the BLUE BACK function on? (see page 12.)

### Remote control inoperable

- Replace the batteries. (see page 3.)

### Buttons on front of the TV do not work

- Switch the CHILD LOCK function off. (see page 12.)

### TV does not respond immediately

- Press the main power button on the TV to turn off the main power. Press the main power button again to turn on the TV. If the TV returns to a normal state, operation is normal.

### The TV turns off suddenly

- Is the OFF TIMER function set to operate? (see page 9.)
- Is the AUTO SHUTOFF function on? (see page 12.)
- Have you not performed an operation for about two hours after the TV was switched on by the ON TIMER function? (see page 11.) If you don't perform an operation within about two hours, the TV is automatically switched off for safety.

### Poor sound

- Press the SOUND SYSTEM button to select another sound system. (see page 8.)

### Poor picture

- Press the COLOUR SYSTEM button to select another colour system. (see page 8.)
- Adjust the picture settings. (see page 15.)
- Set the Picture mode to STANDARD. (see page 8.)
- If noise (snow) totally blocks out the picture, check the following.
  - Have the TV and aerial been connected properly?
  - Has the aerial cable been damaged?
  - Is the aerial pointing in the right direction?
  - Is the aerial itself faulty?
- If the TV or aerial suffer interference from other equipment, stripes or noise may appear in the picture. Move any equipment which can cause interference away from the TV.
- If the TV or aerial suffer interference from signals reflecting from mountains or buildings, double-pictures (ghosting) will occur. Change the aerial's direction or replace it with an aerial with better directionality.
- When a white and bright still image (such as a white dress) is displayed on the screen, the white part may look as if it is coloured. When the image disappears from the screen, the unnatural colours will also disappear.

### The TV turns on suddenly

- Is the ON TIMER function set to operate? (see page 11.)

### The TV channel changes suddenly

- Is the ON TIMER function set to operate? (see page 11.)

# Specifications

**TV RF systems**

B, G, I, D, K, K1, M

**Colour systems**

PAL, SECAM, NTSC 3.58 MHz/NTSC 4.43 MHz

**Receiving channels**

VHF low channel (VL), VHF high channel (VH), UHF channel (U)
Receives cable channels in mid band, super band and hyper band.

**External input / output**

| | |
|---|---|
| INPUT: | VIDEO input (RCA), AUDIO input (RCA) |
| OUTPUT: | VIDEO output (RCA), AUDIO output (RCA) |
| Headphone jack: | stereo mini jack (3.5 mm diameter) |

**Accessories**

- Remote control unit: RM-C360GY
- AA / R6 / UM-3 dry cell battery × 2

***Design and specifications subject to change without notice.***

## Broadcasting systems

| Area | Country or Region | System | |
|---|---|---|---|
| | | Colour | Sound |
| Asia, Middle East | Bahrain, Kuwait, Oman, Qatar, United Arab Emirates, Yemen, etc. Indonesia, Malaysia, Singapore, Thailand, India, etc. | PAL | B/G |
| | China, Vietnam, etc. | PAL | D/K |
| | Hong Kong, etc. | PAL | I |
| | Islamic Republic of Iran, Lebanon, Saudi Arabia, etc. | SECAM | B/G |
| | Philipins, Taiwan, Myanmar, etc. | NTSC | M |
| Europe | Russia, etc. | SECAM | D/K |
| | Czech Republic, Poland, etc. | PAL | D/K |
| | Germany, Holland, Belgium, etc. | PAL | B/G |
| | UK, etc. | PAL | I |
| Oceania | Australia, New Zealand, etc. | PAL | B/G |
| Africa | Republic of South Africa, etc. | PAL | I |
| | Nigeria, etc. | PAL | B/G |
| | Egypt, Morocco, etc. | SECAM | B/G |

JVC

JVC

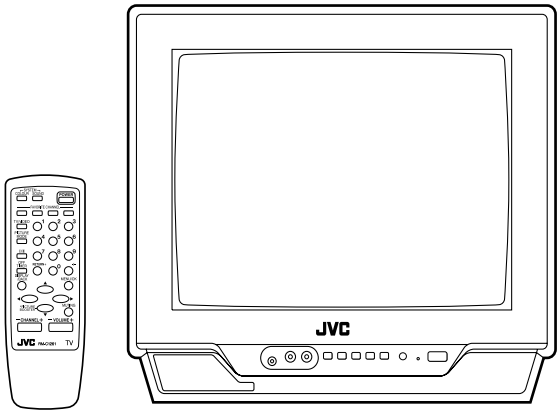
# SCHEMATIC DIAGRAMS

## COLOUR TELEVISION

# AV-14AG16/U

| BASIC CHASSIS |
| --- |
| CG4 |

**CD-ROM No.SML200606**

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**No.YA392**
**2006/6**

# AV-14AG16/U

# STANDARD CIRCUIT DIAGRAM

## ■ NOTE ON USING CIRCUIT DIAGRAMS

### 1.SAFETY

**The components identified by the ⚠ symbol and shading are critical for safety. For continued safety replace safety ciritical components only with manufactures recommended parts.**

### 2.SPECIFIED VOLTAGE AND WAVEFORM VALUES

The voltage and waveform values have been measured under the following conditions.

| | |
|---|---|
| (1)Input signal | : Colour bar signal |
| (2)Setting positions of each knob/button and variable resistor | : Original setting position when shipped |
| (3)Internal resistance of tester | : DC 20kΩ/V |
| (4)Oscilloscope sweeping time | : H ⇒ 20μs / div |
| | : V ⇒ 5ms / div |
| | : Othters ⇒ Sweeping time is specified |
| (5)Voltage values | : All DC voltage values |

∗ Since the voltage values of signal circuit vary to some extent according to adjustments, use them as reference values.

### 3.INDICATION OF PARTS SYMBOL [EXAMPLE]

● In the PW board : R1209 → R209

### 4.INDICATIONS ON THE CIRCUIT DIAGRAM

**(1)Resistors**

● Resistance value

| | |
|---|---|
| No unit | : [Ω] |
| K | : [kΩ] |
| M | : [MΩ] |

● Rated allowable power

| | |
|---|---|
| No indication | : 1/16 [W] |
| Others | : As specified |

● Type

| | |
|---|---|
| No indication | : Carbon resistor |
| OMR | : Oxide metal film resistor |
| MFR | : Metal film resistor |
| MPR | : Metal plate resistor |
| UNFR | : Uninflammable resistor |
| FR | : Fusible resistor |

∗ Composition resistor 1/2 [W] is specified as 1/2S or Comp.

**(2)Capacitors**

● Capacitance value

| | |
|---|---|
| 1 or higher | : [pF] |
| less than 1 | : [μF] |

● Withstand voltage

| | |
|---|---|
| No indication | : DC50[V] |
| Others | : DC withstand voltage [V] |
| AC indicated | : AC withstand voltage [V] |

∗ Electrolytic Capacitors

47/50[Example]: Capacitance value [μF]/withstand voltage[V]

● Type

| | |
|---|---|
| No indication | : Ceramic capacitor |
| MM | : Metalized mylar capacitor |
| PP | : Polypropylene capacitor |
| MPP | : Metalized polypropylene capacitor |
| MF | : Metalized film capacitor |
| TF | : Thin film capacitor |
| BP | : Bipolar electrolytic capacitor |
| TAN | : Tantalum capacitor |

**(3)Coils**

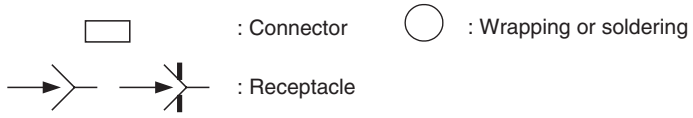
| | |
|---|---|
| No unit | : [μH] |
| Others | : As specified |

**(4)Power Supply**

∗ Respective voltage values are indicated

**(5)Test point**

**(6)Connecting method**




**(7)Ground symbol**

### 5.NOTE FOR REPAIRING SERVICE

This model's power circuit is partly different in the GND. The difference of the GND is shown by the LIVE : ( ⊥ ) side GND and the ISOLATED(NEUTRAL) : ( ⏚ ) side GND. Therefore, care must be taken for the following points.

(1)Do not touch the LIVE side GND or the LIVE side GND and the ISOLATED(NEUTRAL) side GND simultaneously. if the above caution is not respected, an electric shock may be caused. Therefore, make sure that the power cord is surely removed from the receptacle when, for example, the chassis is pulled out.

(2)Do not short between the LIVE side GND and ISOLATED(NEUTRAL) side GND or never measure with a measuring apparatus measure with a measuring apparatus ( oscilloscope, etc.) the LIVE side GND and ISOLATED(NEUTRAL) side GND at the same time. If the above precaution is not respected, a fuse or any parts will be broken.

◆ **Since the circuit diagram is a standard one, the circuit and circuit constants may be subject to change for improvement without any notice.**

**NOTE**

◆ **Due improvement in performance, some part numbers show in the circuit diagram may not agree with those indicated in the part list.**
**When ordering parts, please use the numbers that appear in the Parts List.**

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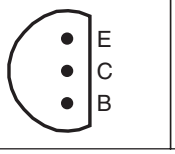
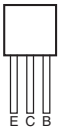
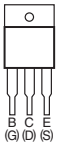
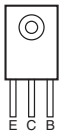
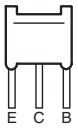
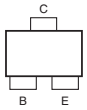
WAVEFORMS ..... 2-12


## USING P.W. BOARD

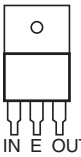
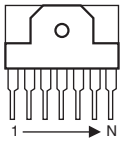
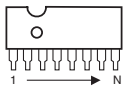
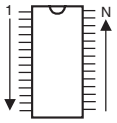
| PWB ASS'Y name | AV-14AG16/U |
|---|---|
| MAIN P.W.BOARD | SCG-1556A-H2 |

## SEMICONDUCTOR SHAPES

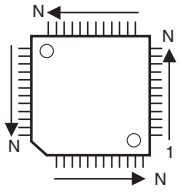
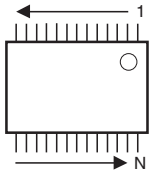
**TRANSISTOR**

| BOTTOM VIEW | FRONT VIEW | | | | TOP VIEW |
|---|---|---|---|---|---|
|   |   |   |   |   | CHIP TR   |

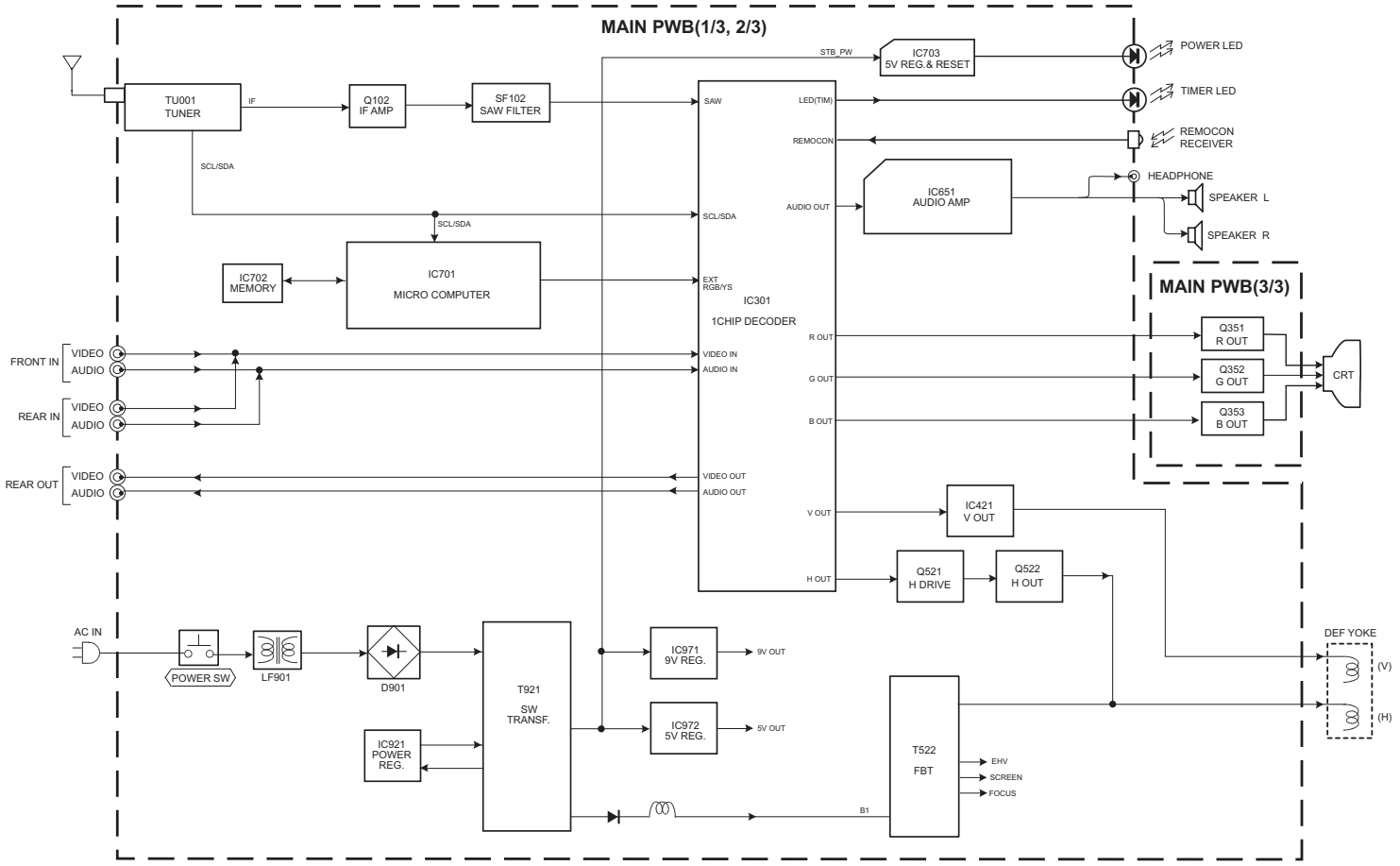
**IC**

| BOTTOM VIEW | FRONT VIEW | | | TOP VIEW |
|---|---|---|---|---|
| |   |   |   |   |

**CHIP IC**

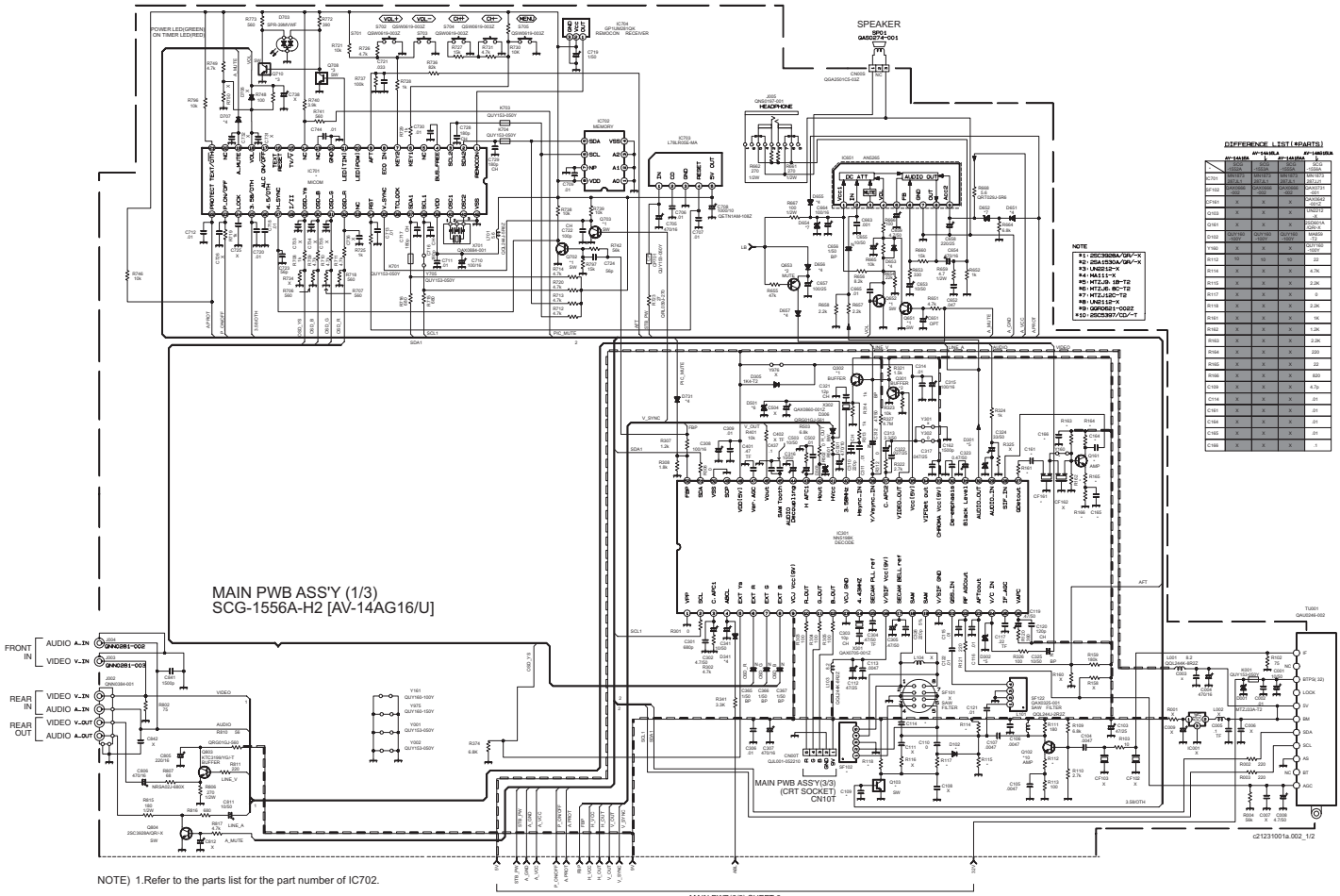
| TOP VIEW | | |
|---|---|---|
|   |   | |

## BLOCK DIAGRAM



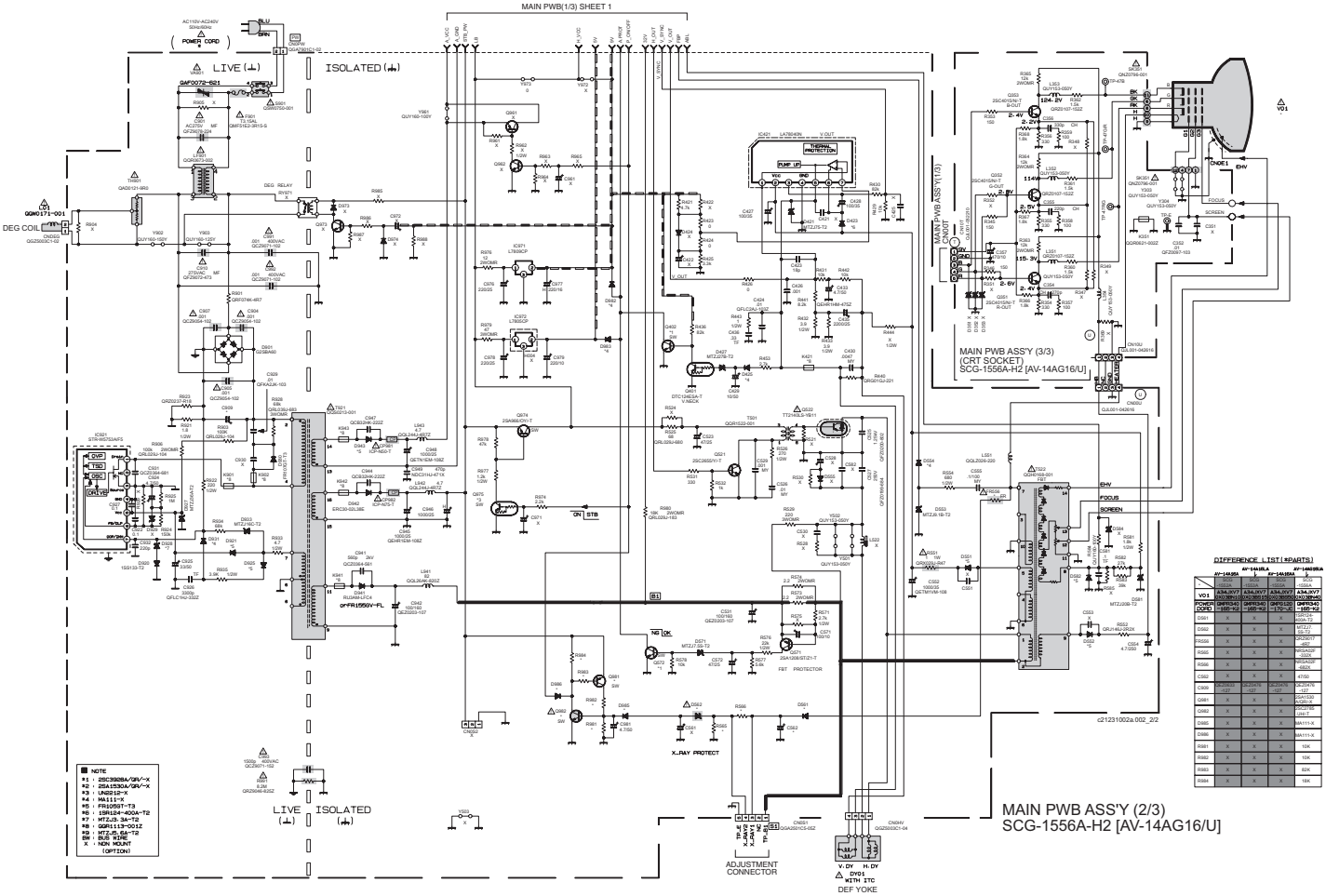
## CIRCUIT DIAGRAMS

*MAIN PWB CIRCUIT DIAGRAM (1/3) SHEET1*




NOTE) 1.Refer to the parts list for the part number of IC702.

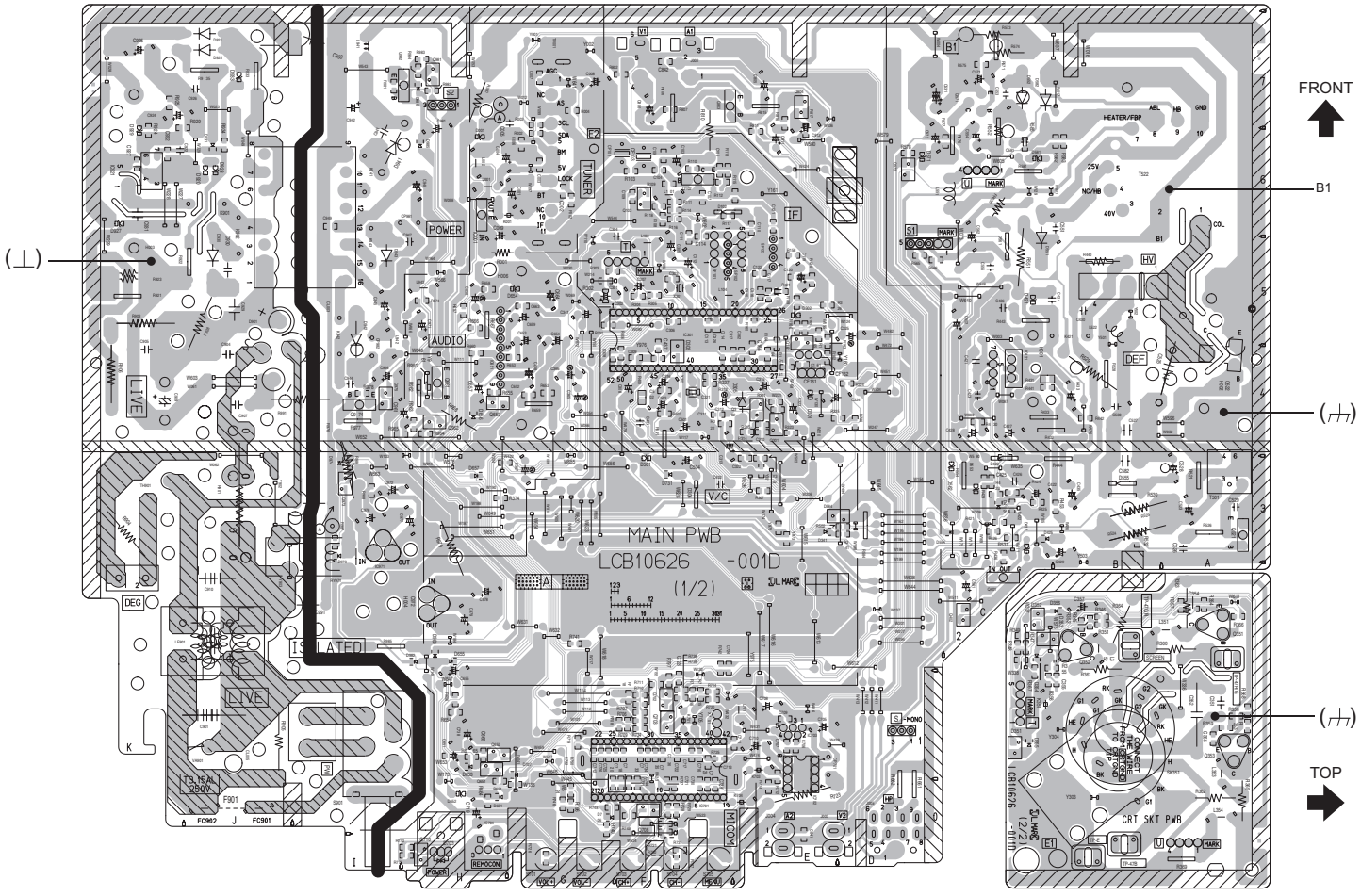
*MAIN PWB CIRCUIT DIAGRAM (2/3),(3/3) SHEET 2*




(No.YA392)2-7 2-8(No.YA392)

## PATTERN DIAGRAMS

*MAIN PWB PATTERN*



# VOLTAGE CHARTS

<MAIN PWB>

| MODE PIN NO. | DC (V) |
|---|---|
| IC301 | |
| 1 | 0 |
| 2 | 4.4 |
| 3 | 6.3 |
| 4 | 3.4 |
| 5 | 0 |
| 6 | 5.0 |
| 7 | 5.0 |
| 8 | 5.5 |
| 9 | 9.0 |
| 10 | 3.0 |
| 11 | 3.0 |
| 12 | 3.0 |
| 13 | 0 |
| 14 | 2.8 |
| 15 | 4.2 |
| 16 | 9.0 |
| 17 | 3.8 |
| 18 | 2.8 |
| 19 | 2.8 |
| 20 | 0 |
| 21 | 0 |
| 22 | 0 |
| 23 | 4.4 |
| 24 | 3.2 |
| 25 | 3.0 |
| 26 | 3.5 |
| 27 | 4.2 |
| 28 | 3.7 |
| 29 | 4.1 |
| 30 | 3.9 |
| 31 | 4.2 |
| 32 | 4.2 |
| 33 | 9.0 |
| 34 | 4.0 |
| 35 | 4.7 |
| 36 | 4.0 |
| 37 | 6.1 |
| 38 | 4.2 |
| 39 | 4.3 |
| 40 | 2.7 |
| 41 | 6.2 |
| 42 | 1.0 |
| 43 | 3.7 |
| 44 | 3.9 |
| 45 | 1.2 |
| 46 | 3.1 |
| 47 | 5.4 |
| 48 | 5.0 |
| 49 | 0.7 |
| 50 | 0 |
| 51 | 4.4 |
| 52 | 0.7 |
| IC421 | |
| 1 | 3.7 |
| 2 | 26.0 |
| 3 | 2.0 |
| 4 | 0 |
| 5 | 13.8 |
| 6 | 26.3 |
| 7 | 3.7 |
| IC651 | |
| 1 | 12.5 |
| 2 | 5.6 |
| 3 | 0 |
| 4 | 2.4 |
| 5 | 9.4 |
| 6 | 9.6 |
| 7 | 0 |
| 8 | 9.7 |
| 9 | 19.9 |
| IC701 | |
| 1 | 4.5 |
| 2 | 4.9 |
| 3 | 0 |
| 4 | 0 |
| 5 | 0 |
| 6 | 4.9 |
| 7 | 4.9 |
| 8 | 2.3 |
| 9 | 3.0 |
| 10 | 4.9 |
| 11 | 0 |
| 12 | 0 |
| 13 | 2.4 |
| 14 | 0.1 |
| 15 | 1.8 |
| 16 | 1.8 |
| 17 | 0 |
| 18 | 0.8 |
| 19 | 0 |
| 20 | 4.9 |
| 21 | 4.9 |
| 22 | 4.9 |
| 23 | 4.9 |
| 24 | 2.3 |
| 25 | 4.9 |

| MODE PIN NO. | DC (V) |
|---|---|
| 26 | 0 |
| 27 | 4.1 |
| 28 | 4.9 |
| 29 | 0 |
| 30 | 0 |
| 31 | 0 |
| 32 | 0 |
| 33 | 0 |
| 34 | 4.9 |
| 35 | 4.7 |
| 36 | 4.9 |
| 37 | 4.4 |
| 38 | 4.4 |
| 39 | 4.9 |
| 40 | 0 |
| 41 | 2.1 |
| 42 | 0 |
| IC702 | |
| 1 | 0 |
| 2 | 0 |
| 3 | 0 |
| 4 | 0 |
| 5 | 4.9 |
| 6 | 4.9 |
| 7 | 0 |
| 8 | 4.9 |
| IC703 | |
| 1 | 14.4 |
| 2 | 5.8 |
| 3 | 0 |
| 4 | 4.9 |
| 5 | 4.9 |
| IC704 | |
| 1 | 4.5 |
| 2 | 4.9 |
| 3 | 0 |
| IC921 | |
| 1 | 314.0 |
| 2 | NC |
| 3 | 0 |
| 4 | 0 |
| 5 | 31.8 |
| 6 | 0 |
| 7 | 0.7 |
| IC971 | |
| 1 | 12.8 |
| 2 | 9.0 |
| 3 | 0 |
| IC972 | |
| 1 | 9.2 |
| 2 | 4.9 |
| 3 | 0 |
| Q102 | |
| E | 0 |
| C | 9.0 |
| B | 2.3 |
| Q103 | |
| E | 0 |
| C | 0 |
| B | 4.0 |
| Q161 | |
| E | 2.5 |
| C | 8.3 |
| B | 3.2 |
| Q301 | |
| E | 4.6 |
| C | 0 |
| B | 4.0 |
| Q302 | |
| E | 4.0 |
| C | 9.0 |
| B | 4.6 |
| Q401 | |
| E | 0 |
| C | 0 |
| B | 5.4 |
| Q402 | |
| E | 0 |
| C | 4.9 |
| B | 0 |
| Q521 | |
| E | 0 |
| C | 9.7 |
| B | 0.3 |
| Q522 | |
| E | 0 |
| C | 115.3 |
| B | 0 |
| Q571 | |
| E | 115.5 |
| C | 0 |
| B | 115.1 |
| Q572 | |
| E | 0 |
| C | 4.9 |
| B | 0 |

| MODE PIN NO. | DC (V) |
|---|---|
| Q651 | |
| E | 0 |
| C | 0.3 |
| B | 0 |
| Q652 | |
| E | 0 |
| C | 1.0 |
| B | 0.6 |
| Q653 | |
| E | 15.1 |
| C | 0 |
| B | 15.2 |
| Q702 | |
| E | 0 |
| C | 4.2 |
| B | 0 |
| Q703 | |
| E | 0 |
| C | 4.8 |
| B | 0.1 |
| Q708 | |
| E | 0 |
| C | 2.0 |
| B | 0 |
| Q710 | |
| E | 0 |
| C | 0.1 |
| B | 0 |
| Q803 | |
| E | 0 |
| C | 8.1 |
| B | 4.7 |
| Q804 | |
| E | 0 |
| C | 0 |
| B | 0.1 |
| Q974 | |
| E | 15.3 |
| C | 15.1 |
| B | 0 |
| Q975 | |
| E | 0 |
| C | 0.1 |
| B | 4.3 |
| TU001 | |
| 1 | 4.6 |
| 2 | NC |
| 3 | 0 |
| 4 | 4.4 |
| 5 | 0 |
| 6 | 4.5 |
| 7 | 4.9 |
| 8 | 0 |
| 9 | 31.3 |
| 10 | NC |
| 11 | 0 |

<CRT SOCKET PWB>

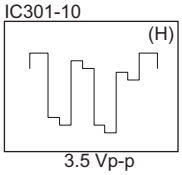
| MODE PIN NO. | DC (V) |
|---|---|
| Q351 | |
| E | 2.5 |
| C | 125.8 |
| B | 3.2 |
| Q352 | |
| E | 2.6 |
| C | 123.3 |
| B | 3.3 |
| Q353 | |
| E | 2.5 |
| C | 128.5 |
| B | 3.2 |

# WAVEFORMS

## -MAIN PWB-

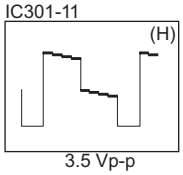
(SHEET1)

IC301-10



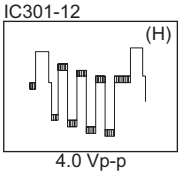

3.5 Vp-p

IC301-11



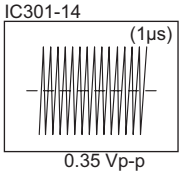

3.5 Vp-p

IC301-12



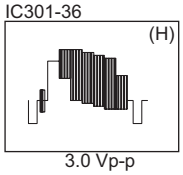

4.0 Vp-p

IC301-14



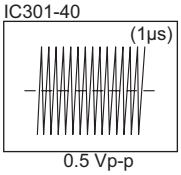

0.35 Vp-p

IC301-36



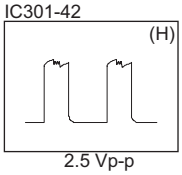

3.0 Vp-p

IC301-40



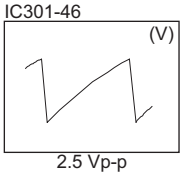

0.5 Vp-p

IC301-42



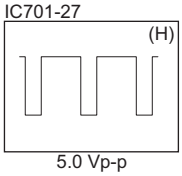

2.5 Vp-p

IC301-46



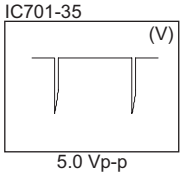

2.5 Vp-p

IC701-27




5.0 Vp-p

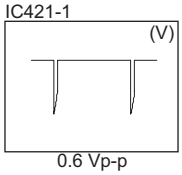
IC701-35




5.0 Vp-p

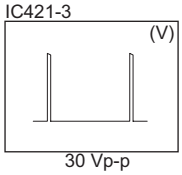
(SHEET2)

IC421-1



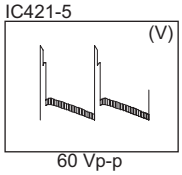

0.6 Vp-p

IC421-3



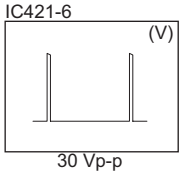

30 Vp-p

IC421-5



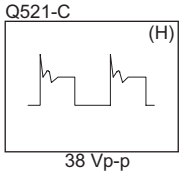

60 Vp-p

IC421-6



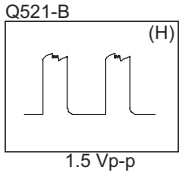

30 Vp-p

Q521-C



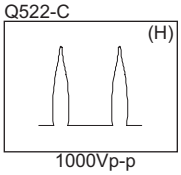

38 Vp-p

Q521-B



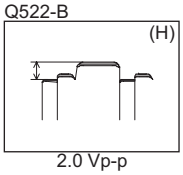

1.5 Vp-p

Q522-C



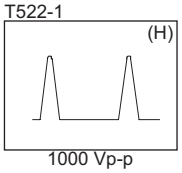

1000Vp-p

Q522-B



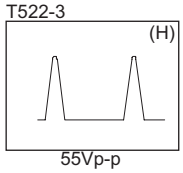

2.0 Vp-p

T522-1



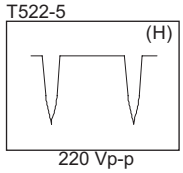

1000 Vp-p

T522-3



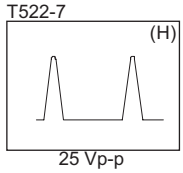

55Vp-p

T522-5



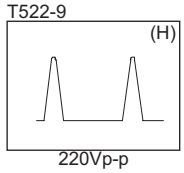

220 Vp-p

T522-7




25 Vp-p

T522-9

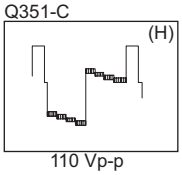



220Vp-p

## -CRT SOCKET PWB-

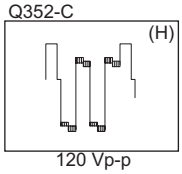
(SHEET2)

Q351-C



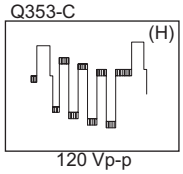

110 Vp-p

Q352-C




120 Vp-p

Q353-C




120 Vp-p

JVC
Victor Company of Japan, Limited
CRT Display Category 12, 3-chome, Moriya-cho, Kanagawa-ku, Yokohama-city, Kanagawa-prefecture, 221-8528, Japan

(No.YA392)

Printed in Japan
VPT

# PARTS LIST

## CAUTION

- The parts identified by the ⚠ symbol are important for the safety . Whenever replacing these parts, be sure to use specified ones to secure the safety.
- The parts not indicated in this Parts List and those which are filled with lines --- in the Parts No. columns will not be supplied.
- P.W. BOARD Ass'y will not be supplied, but those which are filled with the Parts No. in the Parts No. columns will be supplied.

ABBREVIATIONS OF RESISTORS, CAPACITORS AND TOLERANCES

| RESISTORS | |
|---|---|
| CR | Carbon Resistor |
| FR | Fusible Resistor |
| PR | Plate Resistor |
| VR | Variable Resistor |
| HV R | High Voltage Resistor |
| MF R | Metal Film Resistor |
| MG R | Metal Glazed Resistor |
| MP R | Metal Plate Resistor |
| OM R | Metal Oxide Film Resistor |
| CMF R | Coating Metal Film Resistor |
| UNF R | Non-Flammable Resistor |
| CH V R | Chip Variable Resistor |
| CH MG R | Chip Metal Glazed Resistor |
| COMP. R | Composition Resistor |
| LPTC R | Linear Positive Temperature Coefficient Resistor |

| CAPACITORS | |
|---|---|
| C CAP. | Ceramic Capacitor |
| E CAP. | Electrolytic Capacitor |
| M CAP. | Mylar Capacitor |
| CH CAP. | Chip Capacitor |
| HV CAP. | High Voltage Capacitor |
| MF CAP. | Metalized Film Capacitor |
| MM CAP. | Metalized Mylar Capacitor |
| MP CAP. | Metalized Polystyrol Capacitor |
| PP CAP. | Polypropylene Capacitor |
| PS CAP. | Polystyrol Capacitor |
| TF CAP. | Thin Film Capacitor |
| MPP CAP. | Metalized Polypropylene Capacitor |
| TAN. CAP. | Tantalum Capacitor |
| CH C CAP. | Chip Ceramic Capacitor |
| BP E CAP. | Bi-Polar Electrolytic Capacitor |
| CH AL E CAP. | Chip Aluminum Electrolytic Capacitor |
| CH AL BP CAP. | Chip Aluminum Bi-Polar Capacitor |
| CH TAN. E CAP. | Chip Tantalum Electrolytic Capacitor |
| CH AL BP E CAP. | Chip Tantalum Bi-Polar Electrolytic Capacitor |

| RESISTORS | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| F | G | J | K | M | N | R | H | Z | P |
| ±1% | ±2% | ±5% | ±10% | ±20% | ±30% | +30%<br>-10% | +50%<br>-10% | +80%<br>-20% | +100%<br>-0% |

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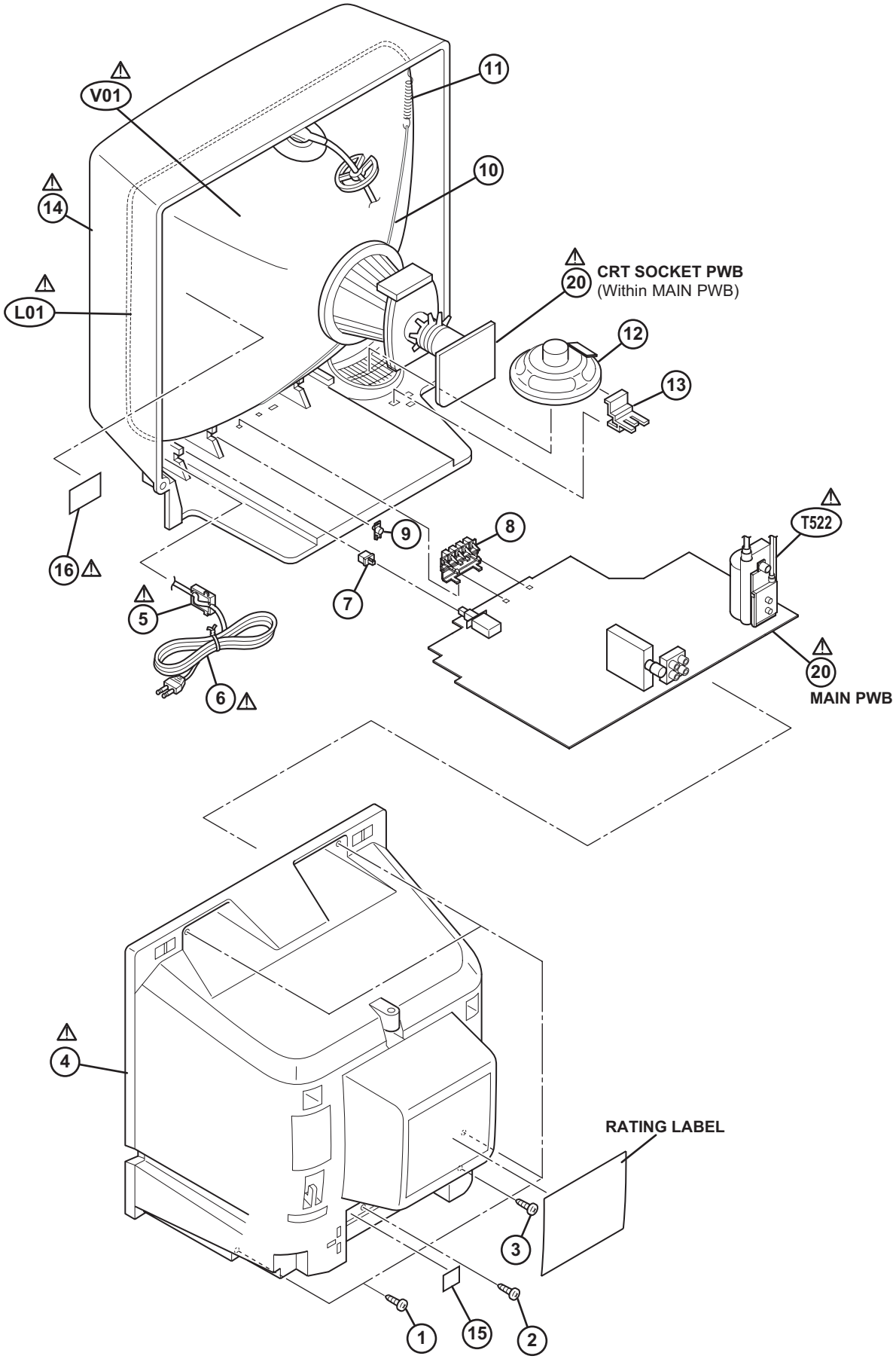
# USING P.W. BOARD & REMOTE CONTROL UNIT

| P.W.B ASS'Y | AV-14AG16/U |
|---|---|
| MAIN P.W.B | SCG-1556A-H2 |
| REMOTE CONTROL UNIT | RM-C360GY-1H |

# EXPLODED VIEW PARTS LIST -1

| ⚠ | Ref.No. | Part No. | Part Name | Description | Local |
|---|---|---|---|---|---|
| ⚠ | V01 | A34JXV70X03BN40 | ITC | | |
| ⚠ | L01 | QQW0171-001 | DEG COIL | | |
| ⚠ | T522 | QQH0168-001 | FB TRANSF | | |
| | 1 | QYSBSFG4016ZA | TAP SCREW | M4 x 16mm(x4) | |
| | 2 | QYSBSF3010ZA | TAP SCREW | M3 x 10mm | |
| | 3 | QYSBSFG4012MA | TAP SCREW | M4 x 12mm | |
| ⚠ | 4 | LC10165-009A-H | REAR COVER | | |
| ⚠ | 5 | CM47005-A01-H | POWER CORD CLAMP | | |
| ⚠ | 6 | QMPR340-165-K2 | POWER CORD | 1.65m BLACK | |
| | 7 | LC30348-003A-H | POWER KNOB | | |
| | 8 | LC30347-003A-H | CONTROL KNOB | | |
| | 9 | LC30346-001B-H | REMOCON LENS | | |
| | 10 | WJY0013-010A-E | BRAIDED ASS'Y | | |
| | 11 | A48457-3-H | SPRING | | |
| | 12 | QAS0274-001 | SPEAKER | SP01 | |
| | 13 | LC30345-001B-H | SP HOLDER | | |
| ⚠ | 14 | LC10164-035A-H | FRONT CABINET | | |
| | 15 | CM47692-001-H | HYATT LABEL | | |
| ⚠ | 16 | CM36141-010-H | WARNING LABEL | | |
| ⚠ | 20 | SCG-1556A-H2 | MAIN PWB | | |

# EXPLODED VIEW -1



# PRINTED WIRING BOARD PARTS LIST

## MAIN P.W. BOARD ASS'Y (SCG-1556A-H2)

| ⚠Ref No. | Part No. | Part Name | Description Local |
|---|---|---|---|
| IC301 | NN5198K | IC | |
| IC421 | LA78040N | IC | |
| IC651 | AN5265 | IC | |
| IC701 | MN1873287JJ1 | IC | |
| IC702 | ATE08-21YMG6 | IC | (SERVICE) |
| IC703 | L78LR05E-MA | IC | |
| IC704 | GP1UM281QK | IR DETECT UNIT | 38kHz |
| IC921 | STR-W5753A/F5 | IC | |
| IC971 | L7809CP | IC | |
| IC972 | L7805CP | IC | |
| Q102 | 2SC5397/CD/-T | TRANSISTOR | |
| Q103 | UN2212-X | DIGI TRANSISTOR | |
| Q161 | 2SD601A/QR/-X | TRANSISTOR | |
| Q301 | 2SA1530A/QR/-X | TRANSISTOR | |
| Q302 | 2SC3928A/QR/-X | TRANSISTOR | |
| Q351 | 2SC4015/N/-T | TRANSISTOR | |
| Q352 | 2SC4015/N/-T | TRANSISTOR | |
| Q353 | 2SC4015/N/-T | TRANSISTOR | |
| Q401 | DTC124ESA-T | DIGI TRANSISTOR | |
| Q402 | 2SC3928A/QR/-X | TRANSISTOR | |
| Q521 | 2SC2655/Y/-T | TRANSISTOR | |
| ⚠Q522 | TT2140LS-YB11 | POW TRANSISTOR | |
| Q571 | 2SA1208/ST/Z1-T | TRANSISTOR | |
| Q572 | 2SC3928A/QR/-X | TRANSISTOR | |
| Q651 | 2SC3928A/QR/-X | TRANSISTOR | |
| Q652 | 2SC3928A/QR/-X | TRANSISTOR | |
| Q653 | 2SA1530A/QR/-X | TRANSISTOR | |
| Q702 | 2SC3928A/QR/-X | TRANSISTOR | |
| Q703 | 2SC3928A/QR/-X | TRANSISTOR | |
| Q708 | UN2212-X | DIGI TRANSISTOR | |
| Q710 | UN2212-X | DIGI TRANSISTOR | |
| Q803 | KTC3199/YG/-T | TRANSISTOR | |
| Q804 | 2SC3928A/QR/-X | TRANSISTOR | |
| Q974 | 2SA966/OY/-T | TRANSISTOR | |
| Q975 | UN2212-X | DIGI TRANSISTOR | |
| Q981 | 2SA1530A/QR/-X | TRANSISTOR | |
| ⚠Q982 | 2SC2785/JH/-T | TRANSISTOR | |
| D001 | MTZJ33A-T2 | Z DIODE | |
| D102 | MA859-T2 | SI DIODE | |
| D301 | MTZJ9.1B-T2 | Z DIODE | |
| D302 | MTZJ9.1B-T2 | Z DIODE | |
| D303 | MA3091/M/-X | Z DIODE | |
| D305 | 1K4-T2 | SB DIODE | |
| D306 | QRE121J-561Y | C RESISTOR | 560Ω 1/2W J |
| D306 | or QRE122J-561 | C RESISTOR | 560Ω 1/2W J |
| D306 | or QRG01GJ-561 | OMF RESISTOR | 560Ω 1W J |
| D341 | MA111-X | SI DIODE | |
| D421 | MTZJ75-T2 | Z DIODE | |
| D423 | 1SR124-400A-T2 | SI DIODE | |
| D425 | MA111-X | SI DIODE | |
| D427 | MTZJ27B-T2 | Z DIODE | |
| D501 | MTZJ6.8C-T2 | Z DIODE | |
| D551 | FR105GT-T3 | SI DIODE | |
| D552 | FR105GT-T3 | SI DIODE | |
| D553 | MTZJ9.1B-T2 | Z DIODE | |
| D554 | MA111-X | SI DIODE | |
| D561 | 1SR124-400A-T2 | SI DIODE | |
| ⚠D562 | MTZJ7.5S-T2 | Z DIODE | |
| D571 | MTZJ7.5S-T2 | Z DIODE | |
| D581 | MTZJ20B-T2 | Z DIODE | |
| D582 | FR105GT-T3 | SI DIODE | |
| D651 | MA111-X | SI DIODE | |
| D652 | MTZJ12C-T2 | Z DIODE | |
| D653 | MA111-X | SI DIODE | |
| D654 | MTZJ12C-T2 | Z DIODE | |
| D655 | MA111-X | SI DIODE | |
| D656 | MA111-X | SI DIODE | |
| D657 | MA111-X | SI DIODE | |
| D703 | SPR-39MVWF | LED | POWER ON TIMER(RED-GREEN) |
| D707 | MA111-X | SI DIODE | |
| D731 | MA111-X | SI DIODE | |
| D901 | G2SBA60 | BRIDGE DIODE | |
| D920 | 1SS133-T2 | SI DIODE | |
| D921 | FR105GT-T3 | SI DIODE | |
| D925 | FR105GT-T3 | SI DIODE | |
| D927 | MTZJ36A-T2 | Z DIODE | |
| D928 | MTZJ3.3A-T2 | Z DIODE | |
| D930 | FR107GT-T3 | SI DIODE | |
| D931 | MA111-X | SI DIODE | |
| D933 | MTZJ16C-T2 | Z DIODE | |

| ⚠Ref No. | Part No. | Part Name | Description Local |
|---|---|---|---|
| D941 | RU3AM-LFC4 | SI DIODE | |
| D942 | ERC30-02L38E | SI DIODE | |
| D943 | FR105GT-T3 | SI DIODE | |
| D982 | MA111-X | SI DIODE | |
| D983 | MA111-X | SI DIODE | |
| D985 | MA111-X | SI DIODE | |
| D986 | MA111-X | SI DIODE | |
| C001 | QETN1HM-106Z | E CAPACITOR | 10uF 50V M |
| C002 | NCB31HK-103X | C CAPACITOR | 0.01uF 50V K |
| C004 | QETN1CM-477Z | E CAPACITOR | 470uF 16V M |
| C005 | QFVF1HJ-104Z | MF CAPACITOR | 0.1uF 50V J |
| C008 | QETN1HM-475Z | E CAPACITOR | 4.7uF 50V M |
| C103 | QETN1EM-476Z | E CAPACITOR | 47uF 25V M |
| C104 | NCB31HK-472X | C CAPACITOR | 4700pF 50V K |
| C105 | NCB31HK-472X | C CAPACITOR | 4700pF 50V K |
| C106 | NCB31HK-472X | C CAPACITOR | 4700pF 50V K |
| C107 | NCB31HK-472X | C CAPACITOR | 4700pF 50V K |
| C109 | NCB31HK-472X | C CAPACITOR | 4700pF 50V K |
| C110 | NRSA63J-0R0X | MG RESISTOR | 0Ω 1/16W J |
| C112 | QETN1EM-476Z | E CAPACITOR | 47uF 25V M |
| C113 | NCB31HK-472X | C CAPACITOR | 4700pF 50V K |
| C114 | NCB31HK-103X | C CAPACITOR | 0.01uF 50V K |
| C115 | NCB31HK-103X | C CAPACITOR | 0.01uF 50V K |
| C116 | NCB31HK-103X | C CAPACITOR | 0.01uF 50V K |
| C117 | QFVF1HJ-224Z | MF CAPACITOR | 0.22uF 50V J |
| C119 | QETN1HM-474Z | E CAPACITOR | 0.47uF 50V M |
| C120 | NDC31HJ-121X | C CAPACITOR | 120pF 50V J |
| C121 | NCB31HK-103X | C CAPACITOR | 0.01uF 50V K |
| C122 | NCB31HK-103X | C CAPACITOR | 0.01uF 50V K |
| C161 | NCB31HK-103X | C CAPACITOR | 0.01uF 50V K |
| C162 | NCB31HK-152X | C CAPACITOR | 1500pF 50V K |
| C164 | NCB31HK-103X | C CAPACITOR | 0.01uF 50V K |
| C165 | NCB31HK-103X | C CAPACITOR | 0.01uF 50V K |
| C166 | NCB31HK-104X | C CAPACITOR | 0.1uF 50V K |
| C301 | NCB31HK-681X | C CAPACITOR | 680pF 50V K |
| C302 | QETN1HM-475Z | E CAPACITOR | 4.7uF 50V M |
| C303 | NDC31HJ-100X | C CAPACITOR | 10pF 50V J |
| C304 | QFVF1HJ-474Z | MF CAPACITOR | 0.47uF 50V J |
| C305 | QETN1HM-474Z | E CAPACITOR | 0.47uF 50V M |
| C306 | NCB31HK-103X | C CAPACITOR | 0.01uF 50V K |
| C307 | QETN1CM-477Z | E CAPACITOR | 470uF 16V M |
| C308 | QETN1CM-107Z | E CAPACITOR | 100uF 16V M |
| C309 | NCB31HK-103X | C CAPACITOR | 0.01uF 50V K |
| C310 | NDC31HJ-221X | C CAPACITOR | 220pF 50V J |
| C311 | NCB31HK-103X | C CAPACITOR | 0.01uF 50V K |
| C312 | QENC1HM-474Z | BP E CAPACITOR | 0.47uF 50V M |
| C313 | QETN1HM-335Z | E CAPACITOR | 3.3uF 50V M |
| C314 | NCB31HK-103X | C CAPACITOR | 0.01uF 50V K |
| C315 | QETN1CM-107Z | E CAPACITOR | 100uF 16V M |
| C316 | QETN1HM-106Z | E CAPACITOR | 10uF 50V M |
| C317 | NCB31EK-473X | C CAPACITOR | 0.047uF 25V K |
| C321 | NDC31HJ-120X | C CAPACITOR | 12pF 50V J |
| C322 | NCB31EK-273X | C CAPACITOR | 0.027uF 25V K |
| C323 | QETN1HM-474Z | E CAPACITOR | 0.47uF 50V M |
| C324 | QETN1HM-336Z | E CAPACITOR | 33uF 50V M |
| C325 | QENC1HM-106Z | BP E CAPACITOR | 10uF 50V M |
| C326 | NCS21HJ-221X | C CAPACITOR | 220pF 50V J |
| C341 | QETN1HM-106Z | E CAPACITOR | 10uF 50V M |
| C352 | QFZ0097-103 | MM CAPACITOR | 0.01uF 1250V K |
| C354 | NDC31HJ-271X | C CAPACITOR | 270pF 50V J |
| C355 | NDC31HJ-221X | C CAPACITOR | 220pF 50V J |
| C356 | NDC31HJ-331X | C CAPACITOR | 330pF 50V J |
| C357 | QETN1AM-477Z | E CAPACITOR | 470uF 10V M |
| C365 | QENC1HM-105Z | BP E CAPACITOR | 1uF 50V M |
| C366 | QENC1HM-105Z | BP E CAPACITOR | 1uF 50V M |
| C367 | QENC1HM-105Z | BP E CAPACITOR | 1uF 50V M |
| C401 | QFVF1HJ-474Z | MF CAPACITOR | 0.47uF 50V J |
| C423 | QCS32HJ-180Z | C CAPACITOR | 18pF 500V J |
| C424 | QFLC2AJ-103Z | M CAPACITOR | 0.01uF 100V J |
| C426 | QFLC1HJ-102Z | M CAPACITOR | 1000pF 50V J |
| C427 | QETN1VM-107Z | E CAPACITOR | 100uF 35V M |
| C428 | QETN1VM-107Z | E CAPACITOR | 100uF 35V M |
| C429 | QETN1HM-106Z | E CAPACITOR | 10uF 50V M |
| C430 | QFN32AJ-472Z | M CAPACITOR | 4700pF 100V J |
| C433 | QEHR1HM-475Z | E CAPACITOR | 4.7uF 50V M |
| C435 | QETM1EM-228 | E CAPACITOR | 2200uF 25V M |
| C436 | QFVF1HJ-334Z | MF CAPACITOR | 0.33uF 50V J |
| C437 | NCB31HK-104X | C CAPACITOR | 0.1uF 50V K |
| C501 | QETN1EM-476Z | E CAPACITOR | 47uF 25V M |
| C502 | NCB31HK-103X | C CAPACITOR | 0.01uF 50V K |
| C503 | QETN1HM-106Z | E CAPACITOR | 10uF 50V M |
| C523 | QETN1EM-476Z | E CAPACITOR | 47uF 25V M |
| C525 | QFZ0200-802 | MPP CAPACITOR | 8000pF 1.5kV H |

| ⚠Ref No. | Part No. | Part Name | Description Local |
|---|---|---|---|
| C526 | QFLC1HJ-103Z | M CAPACITOR | 0.01uF 50V J |
| C527 | QFZ0197-684 | MPP CAPACITOR | 0.68uF 250V J |
| C529 | QFN32AJ-102Z | M CAPACITOR | 1000pF 100V J |
| C531 | QEZ0203-107 | E CAPACITOR | 100uF 160V M |
| C552 | QETM1VM-108 | E CAPACITOR | 1000uF 35V M |
| C554 | QETN2EM-475Z | E CAPACITOR | 4.7uF 250V M |
| C555 | QFLC2AJ-104Z | M CAPACITOR | 0.1uF 100V J |
| C562 | QETN1HM-476Z | E CAPACITOR | 47uF 50V M |
| C571 | QETN1AM-107Z | E CAPACITOR | 100uF 10V M |
| C572 | QETN1EM-476Z | E CAPACITOR | 47uF 25V M |
| C581 | QFVF1HJ-104Z | MF CAPACITOR | 0.1uF 50V J |
| C652 | NCB31HK-473X | C CAPACITOR | 0.047uF 50V K |
| C653 | QETN1HM-106Z | E CAPACITOR | 10uF 50V M |
| C654 | QETN1CM-477Z | E CAPACITOR | 470uF 16V M |
| C655 | QETN1HM-106Z | E CAPACITOR | 10uF 50V M |
| C656 | QENC1HM-105Z | BP E CAPACITOR | 1uF 50V M |
| C657 | QETN1EM-107Z | E CAPACITOR | 100uF 25V M |
| C658 | QETN1EM-227Z | E CAPACITOR | 220uF 25V M |
| C659 | QETN1HM-475Z | E CAPACITOR | 4.7uF 50V M |
| C663 | NCB31HK-102X | C CAPACITOR | 1000pF 50V K |
| C664 | QETN1CM-107Z | E CAPACITOR | 100uF 16V M |
| C665 | NCB31HK-103X | C CAPACITOR | 0.01uF 50V K |
| C705 | QETN1CM-477Z | E CAPACITOR | 470uF 16V M |
| C706 | NCB31HK-104X | C CAPACITOR | 0.1uF 50V K |
| C707 | NCB31HK-103X | C CAPACITOR | 0.01uF 50V K |
| C708 | QETN1AM-108Z | E CAPACITOR | 1000uF 10V M |
| C709 | NCB31HK-103X | C CAPACITOR | 0.01uF 50V K |
| C710 | QETN1CM-107Z | E CAPACITOR | 100uF 16V M |
| C711 | NCB31HK-103X | C CAPACITOR | 0.01uF 50V K |
| C712 | NCB31HK-103X | C CAPACITOR | 0.01uF 50V K |
| C713 | NCB31HK-103X | C CAPACITOR | 0.01uF 50V K |
| C716 | NDC31HJ-181X | C CAPACITOR | 180pF 50V J |
| C717 | NDC31HJ-181X | C CAPACITOR | 180pF 50V J |
| C718 | NCB31HK-103X | C CAPACITOR | 0.01uF 50V K |
| C719 | QETN1HM-105Z | E CAPACITOR | 1uF 50V M |
| C720 | NCB31HK-103X | C CAPACITOR | 0.01uF 50V K |
| C721 | NCB31EK-333X | C CAPACITOR | 0.033uF 25V K |
| C722 | NDC31HJ-101X | C CAPACITOR | 100pF 50V J |
| C723 | NDC31HJ-560X | C CAPACITOR | 56pF 50V J |
| C724 | NDC31HJ-560X | C CAPACITOR | 56pF 50V J |
| C728 | NDC31HJ-181X | C CAPACITOR | 180pF 50V J |
| C729 | NDC31HJ-181X | C CAPACITOR | 180pF 50V J |
| C730 | NCB31HK-103X | C CAPACITOR | 0.01uF 50V K |
| C744 | NCB31HK-103X | C CAPACITOR | 0.01uF 50V K |
| C805 | QETN1CM-227Z | E CAPACITOR | 220uF 16V M |
| C806 | QETN1CM-477Z | E CAPACITOR | 470uF 16V M |
| C811 | QETN1HM-106Z | E CAPACITOR | 10uF 50V M |
| C841 | NCB31HK-152X | C CAPACITOR | 1500pF 50V K |
| ⚠C901 | QFZ9073-224 | MM CAPACITOR | 0.22uF AC250V M |
| ⚠C904 | QCZ9054-102 | C CAPACITOR | 1000pF AC250V Z |
| ⚠C905 | QCZ9054-102 | C CAPACITOR | 1000pF AC250V Z |
| ⚠C907 | QCZ9054-102 | C CAPACITOR | 1000pF AC250V Z |
| C909 | QEZ0476-127 | E CAPACITOR | 120uF |
| ⚠C910 | QFZ9072-473 | MM CAPACITOR | 0.047uF AC250V K |
| C922 | QFLC1HJ-104Z | M CAPACITOR | 0.1uF 50V J |
| C924 | QETN1HM-475Z | E CAPACITOR | 4.7uF 50V M |
| C925 | QETN1HM-336Z | E CAPACITOR | 33uF 50V M |
| C926 | QFLC1HJ-332Z | M CAPACITOR | 3300pF 50V J |
| C927 | NCB31HK-104X | C CAPACITOR | 0.1uF 50V K |
| C929 | QFKA2JK-103 | MM CAPACITOR | 0.01uF 630V K |
| C931 | QCZ0364-681 | C CAPACITOR | 680pF 2kV K |
| C932 | NDC31HJ-221X | C CAPACITOR | 220pF 50V J |
| C941 | QCZ0364-561 | C CAPACITOR | 560pF 2kV K |
| C942 | QEZ0203-107 | E CAPACITOR | 100uF 160V M |
| C944 | QCB32HK-222Z | C CAPACITOR | 2200pF 500V K |
| C945 | QEHR1EM-108Z | E CAPACITOR | 1000uF 25V M |
| C946 | QEHR1EM-108Z | E CAPACITOR | 1000uF 25V M |
| C947 | QCB32HK-222Z | C CAPACITOR | 2200pF 500V K |
| C948 | QETN1EM-108Z | E CAPACITOR | 1000uF 25V M |
| C949 | NDC31HJ-471X | C CAPACITOR | 470pF 50V J |
| C976 | QETN1EM-227Z | E CAPACITOR | 220uF 25V M |
| C977 | QEHR1CM-227Z | E CAPACITOR | 220uF 16V M |
| C978 | QETN1EM-227Z | E CAPACITOR | 220uF 25V M |
| C979 | QETN1AM-227Z | E CAPACITOR | 220uF 10V M |
| C981 | QETN1HM-475Z | E CAPACITOR | 4.7uF 50V M |
| ⚠C991 | QCZ9071-102 | C CAPACITOR | 1000pF AC400V M |
| ⚠C992 | QCZ9071-102 | C CAPACITOR | 1000pF AC400V M |
| ⚠C993 | QCZ9071-152 | C CAPACITOR | 1500pF AC400V M |
| R002 | NRSA63J-221X | MG RESISTOR | 220Ω 1/16W J |
| R003 | NRSA63J-221X | MG RESISTOR | 220Ω 1/16W J |
| R004 | NRSA63J-563X | MG RESISTOR | 56kΩ 1/16W J |
| R102 | NRSA63J-750X | MG RESISTOR | 75Ω 1/16W J |
| R103 | NRSA63J-100X | MG RESISTOR | 10Ω 1/16W J |
| R109 | NRSA63J-682X | MG RESISTOR | 6.8kΩ 1/16W J |
| R110 | NRSA63J-272X | MG RESISTOR | 2.7kΩ 1/16W J |
| R111 | NRSA63J-181X | MG RESISTOR | 180Ω 1/16W J |

| ⚠Ref No. | Part No. | Part Name | Description Local |
|---|---|---|---|
| R112 | NRSA63J-220X | MG RESISTOR | 22Ω 1/16W J |
| R113 | NRSA63J-101X | MG RESISTOR | 100Ω 1/16W J |
| R114 | NRSA63J-472X | MG RESISTOR | 4.7kΩ 1/16W J |
| R115 | NRSA63J-222X | MG RESISTOR | 2.2kΩ 1/16W J |
| R117 | NRSA63J-0R0X | MG RESISTOR | 0Ω 1/16W J |
| R118 | NRSA63J-222X | MG RESISTOR | 2.2kΩ 1/16W J |
| R120 | NRSA63J-391X | MG RESISTOR | 390Ω 1/16W J |
| R121 | NRSA63J-221X | MG RESISTOR | 220Ω 1/16W J |
| R159 | NRSA63J-184X | MG RESISTOR | 180kΩ 1/16W J |
| R161 | NRSA63J-102X | MG RESISTOR | 1kΩ 1/16W J |
| R162 | NRSA63J-122X | MG RESISTOR | 1.2kΩ 1/16W J |
| R163 | NRSA63J-222X | MG RESISTOR | 2.2kΩ 1/16W J |
| R164 | NRSA63J-221X | MG RESISTOR | 220Ω 1/16W J |
| R165 | NRSA63J-220X | MG RESISTOR | 22Ω 1/16W J |
| R166 | NRSA63J-821X | MG RESISTOR | 820Ω 1/16W J |
| R301 | NRSA63J-0R0X | MG RESISTOR | 0Ω 1/16W J |
| R302 | NRSA63J-472X | MG RESISTOR | 4.7kΩ 1/16W J |
| R303 | NRSA63J-101X | MG RESISTOR | 100Ω 1/16W J |
| R304 | NRSA63J-101X | MG RESISTOR | 100Ω 1/16W J |
| R305 | NRSA63J-101X | MG RESISTOR | 100Ω 1/16W J |
| R306 | NRSA63J-0R0X | MG RESISTOR | 0Ω 1/16W J |
| R307 | NRSA63J-122X | MG RESISTOR | 1.2kΩ 1/16W J |
| R308 | NRSA63J-182X | MG RESISTOR | 1.8kΩ 1/16W J |
| R312 | NRSA63J-0R0X | MG RESISTOR | 0Ω 1/16W J |
| R313 | NRSA63J-102X | MG RESISTOR | 1kΩ 1/16W J |
| R314 | NRSA63J-102X | MG RESISTOR | 1kΩ 1/16W J |
| R321 | NRSA63J-152X | MG RESISTOR | 1.5kΩ 1/16W J |
| R322 | NRSA63J-272X | MG RESISTOR | 2.7kΩ 1/16W J |
| R323 | NRSA63J-103X | MG RESISTOR | 10kΩ 1/16W J |
| R324 | NRSA63J-102X | MG RESISTOR | 1kΩ 1/16W J |
| R326 | NRSA63J-101X | MG RESISTOR | 100Ω 1/16W J |
| R327 | NRSA63J-475X | MG RESISTOR | 4.7MΩ 1/16W J |
| R341 | NRSA63J-332X | MG RESISTOR | 3.3kΩ 1/16W J |
| R345 | NRSA63J-151X | MG RESISTOR | 150Ω 1/16W J |
| R346 | NRSA63J-151X | MG RESISTOR | 150Ω 1/16W J |
| R353 | NRSA63J-151X | MG RESISTOR | 150Ω 1/16W J |
| R354 | NRSA63J-331X | MG RESISTOR | 330Ω 1/16W J |
| R355 | NRSA63J-331X | MG RESISTOR | 330Ω 1/16W J |
| R356 | NRSA63J-331X | MG RESISTOR | 330Ω 1/16W J |
| R357 | NRSA63J-101X | MG RESISTOR | 100Ω 1/16W J |
| R358 | NRSA63J-101X | MG RESISTOR | 100Ω 1/16W J |
| R359 | NRSA63J-101X | MG RESISTOR | 100Ω 1/16W J |
| R360 | QRZ0107-152Z | C RESISTOR | 1.5kΩ 1/2W K |
| R361 | QRZ0107-152Z | C RESISTOR | 1.5kΩ 1/2W K |
| R362 | QRZ0107-152Z | C RESISTOR | 1.5kΩ 1/2W K |
| R363 | QRL029J-123 | OMF RESISTOR | 12kΩ 2W J |
| R364 | QRL029J-123 | OMF RESISTOR | 12kΩ 2W J |
| R365 | QRL029J-123 | OMF RESISTOR | 12kΩ 2W J |
| R366 | NRSA63J-182X | MG RESISTOR | 1.8kΩ 1/16W J |
| R367 | NRSA63J-182X | MG RESISTOR | 1.8kΩ 1/16W J |
| R368 | NRSA63J-182X | MG RESISTOR | 1.8kΩ 1/16W J |
| R374 | NRSA63J-682X | MG RESISTOR | 6.8kΩ 1/16W J |
| R401 | NRSA02J-103X | MG RESISTOR | 10kΩ 1/10W J |
| R421 | NRSA63J-472X | MG RESISTOR | 4.7kΩ 1/16W J |
| R423 | NRSA63J-0R0X | MG RESISTOR | 0Ω 1/16W J |
| R424 | NRSA63J-0R0X | MG RESISTOR | 0Ω 1/16W J |
| R425 | NRSA63J-332X | MG RESISTOR | 3.3kΩ 1/16W J |
| R426 | NRSA63J-0R0X | MG RESISTOR | 0Ω 1/16W J |
| R429 | NRSA63J-103X | MG RESISTOR | 10kΩ 1/16W J |
| R430 | NRSA63J-823X | MG RESISTOR | 82kΩ 1/16W J |
| R431 | NRSA02J-103X | MG RESISTOR | 10kΩ 1/10W J |
| R432 | QRE121J-3R9Y | C RESISTOR | 3.9Ω 1/2W J |
| R433 | QRE121J-3R9Y | C RESISTOR | 3.9Ω 1/2W J |
| R436 | NRSA63J-823X | MG RESISTOR | 82kΩ 1/16W J |
| R440 | QRG01GJ-221 | OMF RESISTOR | 220Ω 1W J |
| R441 | NRSA63J-822X | MG RESISTOR | 8.2kΩ 1/16W J |
| R442 | NRSA63J-103X | MG RESISTOR | 10kΩ 1/16W J |
| R443 | QRE121J-1R0Y | C RESISTOR | 1Ω 1/2W J |
| R453 | NRSA63J-272X | MG RESISTOR | 2.7kΩ 1/16W J |
| R502 | NRSA63J-0R0X | MG RESISTOR | 0Ω 1/16W J |
| R503 | NRSA63J-682X | MG RESISTOR | 6.8kΩ 1/16W J |
| R525 | QRL029J-680 | OMF RESISTOR | 68Ω 2W J |
| R526 | QRE121J-271Y | C RESISTOR | 270Ω 1/2W J |
| R529 | QRL039J-221 | OMF RESISTOR | 220Ω 3W J |
| R531 | NRSA63J-331X | MG RESISTOR | 330Ω 1/16W J |
| R532 | NRSA63J-102X | MG RESISTOR | 1kΩ 1/16W J |
| ⚠R551 | QRX029J-R47 | MF RESISTOR | 0.47Ω 2W J |
| R552 | QRJ146J-2R2X | UNF C RESISTOR | 2.2Ω 1/4W J |
| R554 | QRE121J-681Y | C RESISTOR | 680Ω 1/2W J |
| R565 | NRSA02F-332X | MG RESISTOR | 3.3kΩ 1/10W F |
| R566 | NRSA02F-682X | MG RESISTOR | 6.8kΩ 1/10W F |
| R571 | QRE121J-272Y | C RESISTOR | 2.7kΩ 1/2W J |
| R573 | QRT029J-2R2 | MF RESISTOR | 2.2Ω 2W J |
| R574 | QRT029J-2R2 | MF RESISTOR | 2.2Ω 2W J |
| R576 | QRE121J-223Y | C RESISTOR | 22kΩ 1/2W J |
| R577 | NRSA63J-562X | MG RESISTOR | 5.6kΩ 1/16W J |
| R578 | NRSA63J-103X | MG RESISTOR | 10kΩ 1/16W J |

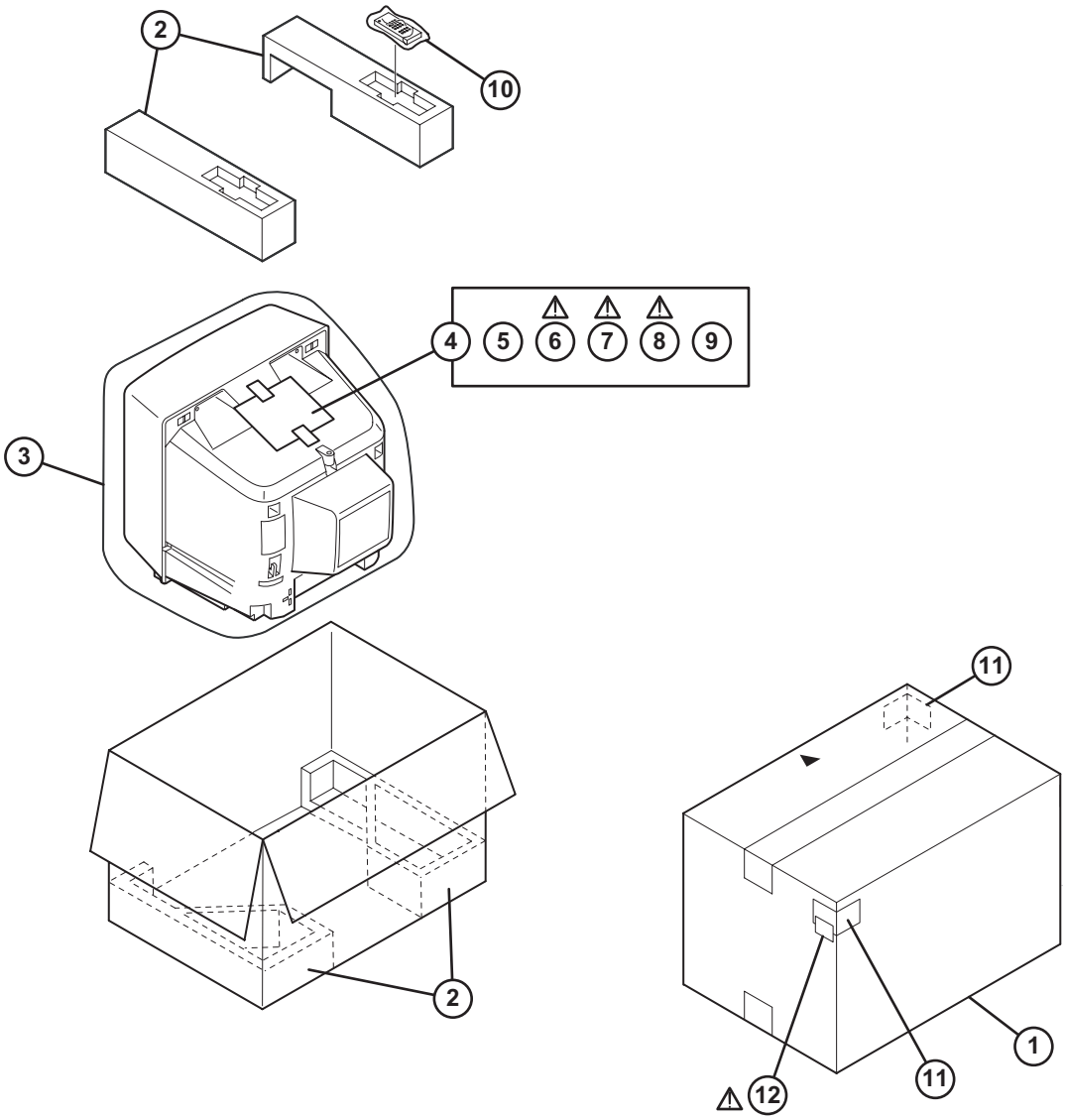
| ⚠Ref No. | Part No. | Part Name | Description Local |
|---|---|---|---|
| R581 | QRE121J-182Y | C RESISTOR | 1.8kΩ 1/2W J |
| R582 | NRSA63J-273X | MG RESISTOR | 27kΩ 1/16W J |
| R583 | NRSA63J-393X | MG RESISTOR | 39kΩ 1/16W J |
| R651 | NRSA63J-472X | MG RESISTOR | 4.7kΩ 1/16W J |
| R652 | NRSA63J-102X | MG RESISTOR | 1kΩ 1/16W J |
| R653 | NRSA63J-331X | MG RESISTOR | 330Ω 1/16W J |
| R654 | NRSA63J-223X | MG RESISTOR | 22kΩ 1/16W J |
| R655 | NRSA63J-473X | MG RESISTOR | 47kΩ 1/16W J |
| R656 | NRSA63J-822X | MG RESISTOR | 8.2kΩ 1/16W J |
| R657 | NRSA63J-222X | MG RESISTOR | 2.2kΩ 1/16W J |
| R658 | NRSA63J-222X | MG RESISTOR | 2.2kΩ 1/16W J |
| R659 | QRE121J-4R7Y | C RESISTOR | 4.7Ω 1/2W J |
| R660 | NRSA63J-153X | MG RESISTOR | 15kΩ 1/16W J |
| R661 | QRE121J-271Y | C RESISTOR | 270Ω 1/2W J |
| R662 | QRE121J-271Y | C RESISTOR | 270Ω 1/2W J |
| R664 | NRSA63J-682X | MG RESISTOR | 6.8kΩ 1/16W J |
| R665 | NRSA63J-103X | MG RESISTOR | 10kΩ 1/16W J |
| R666 | NRSA63J-101X | MG RESISTOR | 100Ω 1/16W J |
| R667 | QRE121J-101Y | C RESISTOR | 100Ω 1/2W J |
| R668 | QRT029J-5R6 | MF RESISTOR | 5.6Ω 2W J |
| R706 | NRSA63J-561X | MG RESISTOR | 560Ω 1/16W J |
| R707 | NRSA63J-561X | MG RESISTOR | 560Ω 1/16W J |
| R708 | NRSA63J-102X | MG RESISTOR | 1kΩ 1/16W J |
| R709 | NRSA63J-472X | MG RESISTOR | 4.7kΩ 1/16W J |
| R710 | NRSA63J-472X | MG RESISTOR | 4.7kΩ 1/16W J |
| R711 | NRSA63J-472X | MG RESISTOR | 4.7kΩ 1/16W J |
| R712 | NRSA63J-472X | MG RESISTOR | 4.7kΩ 1/16W J |
| R713 | NRSA63J-472X | MG RESISTOR | 4.7kΩ 1/16W J |
| R714 | NRSA63J-472X | MG RESISTOR | 4.7kΩ 1/16W J |
| R715 | NRSA63J-681X | MG RESISTOR | 680Ω 1/16W J |
| R716 | NRSA63J-681X | MG RESISTOR | 680Ω 1/16W J |
| R718 | NRSA63J-561X | MG RESISTOR | 560Ω 1/16W J |
| R719 | NRSA63J-102X | MG RESISTOR | 1kΩ 1/16W J |
| R720 | NRSA63J-472X | MG RESISTOR | 4.7kΩ 1/16W J |
| R721 | NRSA63J-103X | MG RESISTOR | 10kΩ 1/16W J |
| R723 | QRL039J-270 | OMF RESISTOR | 27Ω 3W J |
| R725 | NRSA63J-102X | MG RESISTOR | 1kΩ 1/16W J |
| R726 | NRSA63J-472X | MG RESISTOR | 4.7kΩ 1/16W J |
| R727 | NRSA63J-153X | MG RESISTOR | 15kΩ 1/16W J |
| R728 | NRSA63J-102X | MG RESISTOR | 1kΩ 1/16W J |
| R729 | NRSA63J-102X | MG RESISTOR | 1kΩ 1/16W J |
| R730 | NRSA63J-103X | MG RESISTOR | 10kΩ 1/16W J |
| R731 | NRSA63J-472X | MG RESISTOR | 4.7kΩ 1/16W J |
| R736 | NRSA63J-823X | MG RESISTOR | 82kΩ 1/16W J |
| R737 | NRSA63J-104X | MG RESISTOR | 100kΩ 1/16W J |
| R738 | NRSA63J-103X | MG RESISTOR | 10kΩ 1/16W J |
| R739 | NRSA63J-103X | MG RESISTOR | 10kΩ 1/16W J |
| R740 | NRSA63J-392X | MG RESISTOR | 3.9kΩ 1/16W J |
| R741 | NRSA63J-561X | MG RESISTOR | 560Ω 1/16W J |
| R742 | NRSA63J-563X | MG RESISTOR | 56kΩ 1/16W J |
| R746 | NRSA63J-103X | MG RESISTOR | 10kΩ 1/16W J |
| R748 | NRSA63J-101X | MG RESISTOR | 100Ω 1/16W J |
| R749 | NRSA63J-472X | MG RESISTOR | 4.7kΩ 1/16W J |
| R772 | NRSA63J-391X | MG RESISTOR | 390Ω 1/16W J |
| R773 | NRSA63J-561X | MG RESISTOR | 560Ω 1/16W J |
| R796 | NRSA63J-103X | MG RESISTOR | 10kΩ 1/16W J |
| R797 | NRSA63J-153X | MG RESISTOR | 15kΩ 1/16W J |
| R802 | NRSA63J-750X | MG RESISTOR | 75Ω 1/16W J |
| R806 | QRE121J-271Y | C RESISTOR | 270Ω 1/2W J |
| R807 | NRSA63J-680X | MG RESISTOR | 68Ω 1/16W J |
| R810 | QRG01GJ-560 | OMF RESISTOR | 56Ω 1W J |
| R811 | NRSA63J-221X | MG RESISTOR | 220Ω 1/16W J |
| R815 | QRE121J-181Y | C RESISTOR | 180Ω 1/2W J |
| R816 | NRSA63J-681X | MG RESISTOR | 680Ω 1/16W J |
| R817 | NRSA63J-472X | MG RESISTOR | 4.7kΩ 1/16W J |
| R901 | QRF074K-4R7 | UNF WW RESISTOR | 4.7Ω 7W K |
| R903 | QRL029J-104 | OMF RESISTOR | 100kΩ 2W J |
| R906 | QRL029J-104 | OMF RESISTOR | 100kΩ 2W J |
| R921 | QRE121J-1R8Y | C RESISTOR | 1.8Ω 1/2W J |
| R922 | QRE121J-221Y | C RESISTOR | 220Ω 1/2W J |
| R923 | QRZ0237-R18 | UNF WW RESISTOR | 0.18Ω 3W J |
| R924 | NRSA63J-154X | MG RESISTOR | 150kΩ 1/16W J |
| R925 | NRSA63J-105X | MG RESISTOR | 1MΩ 1/16W J |
| R928 | QRL039J-683 | OMF RESISTOR | 68kΩ 3W J |
| R933 | QRE121J-4R7Y | C RESISTOR | 4.7Ω 1/2W J |
| R934 | NRSA63J-683X | MG RESISTOR | 68kΩ 1/16W J |
| R935 | QRE121J-392Y | C RESISTOR | 3.9kΩ 1/2W J |
| R974 | NRSA63J-222X | MG RESISTOR | 2.2kΩ 1/16W J |
| R976 | QRL029J-120 | OMF RESISTOR | 12Ω 2W J |
| R977 | QRE121J-122Y | C RESISTOR | 1.2kΩ 1/2W J |
| R978 | NRSA63J-473X | MG RESISTOR | 47kΩ 1/16W J |
| R979 | QRL039J-470 | OMF RESISTOR | 47Ω 3W J |
| R980 | QRL029J-183 | OMF RESISTOR | 18kΩ 2W J |
| R981 | NRSA63J-103X | MG RESISTOR | 10kΩ 1/16W J |
| R982 | NRSA63J-103X | MG RESISTOR | 10kΩ 1/16W J |
| R983 | NRSA63J-823X | MG RESISTOR | 82kΩ 1/16W J |
| R984 | NRSA63J-183X | MG RESISTOR | 18kΩ 1/16W J |

| ⚠Ref No. | Part No. | Part Name | Description Local |
|---|---|---|---|
| ⚠R991 | QRZ9046-825Z | C RESISTOR | 8.2MΩ 1/2W K |
| L001 | QQL244K-8R2Z | PEAKING COIL | 8.2uH K |
| L101 | QQL244J-2R2Z | PEAKING COIL | 2.2uH J |
| L103 | QQL244K-8R2Z | PEAKING COIL | 8.2uH K |
| L551 | QQLZ026-220 | COIL | 22uH ±7% |
| L701 | QQL244J-5R6Z | COIL | 5.6uH J |
| L941 | QQL26AK-820Z | CHOKE COIL | 82uH K |
| L942 | QQL244J-4R7Z | PEAKING COIL | 4.7uH J |
| L943 | QQL244J-4R7Z | PEAKING COIL | 4.7uH J |
| T501 | QQR1522-001 | DRIVE TRANSF | |
| ⚠T921 | QQS0213-001 | SW TRANSF | |
| CF161 | QAX0642-001Z | C FILTER | 4.500MHz |
| ⚠CP981 | ICP-N50-T | IC PROTECTOR | 2.0A |
| ⚠CP982 | ICP-N75-T | IC PROTECTOR | 2.7A |
| ⚠F901 | QMF51E2-3R15-S | FUSE | 3.15A AC250V |
| ⚠FR556 | QRZ9017-4R7 | FUSI RESISTOR | 4.7Ω 1/4W J |
| J002 | QNN0384-001 | PIN JACK | VIDEO AUDIO IN/OUT(REAR) |
| J003 | QNN0281-003 | PIN JACK | VIDEO IN(FRONT) |
| J004 | QNN0281-002 | PIN JACK | AUDIO IN(FRONT) |
| J005 | QNS0197-001 | 3.5 JACK | HEADPHONE |
| K351 | QQR0621-002Z | FERRITE BEADS | |
| K421 | QQR1113-001Z | FERRITE BEADS | |
| K901 | QQR1113-001Z | FERRITE BEADS | |
| K902 | QQR1113-001Z | FERRITE BEADS | |
| K941 | QQR1113-001Z | FERRITE BEADS | |
| K942 | QQR1113-001Z | FERRITE BEADS | |
| K943 | QQR1113-001Z | FERRITE BEADS | |
| ⚠LF901 | QQR0673-002 | LINE FILTER | |
| S701 | QSW0619-003Z | PUSH SWITCH | VOL+ |
| S702 | QSW0619-003Z | PUSH SWITCH | VOL- |
| S703 | QSW0619-003Z | PUSH SWITCH | CH+ |
| S704 | QSW0619-003Z | PUSH SWITCH | CH- |
| S705 | QSW0619-003Z | PUSH SWITCH | MENU |
| ⚠S901 | QSW0750-001 | PUSH SWITCH | POWER |
| SF102 | QAX0731-001 | SAW FILTER | |
| SF122 | QAX0325-001 | SAW FILTER | |
| ⚠SK351 | QNZ0796-001 | CRT SOCKET | |
| ⚠TH901 | QAD0121-9R0 | P THERMISTOR | 9Ω |
| TU001 | QAU0246-002 | TUNER | |
| ⚠VA901 | QAF0072-621 | VARISTOR | 620V |
| X301 | QAX0705-001Z | CRYSTAL | 4.433619MHz |
| X302 | QAX0860-001Z | CRYSTAL | 3.579545MHz |
| X701 | QAX0884-001 | C RESONATOR | 12.000MHz |
| | LC30349-001A-H | LED HOLDER | |

# REMOTE CONTROL UNIT PARTS LIST (RM-C360GY-1H)

| ⚠ | Ref No. | Part No. | Part Name | Description | Local |
|---|---|---|---|---|---|
| | | R25-8567 | BATTERY COVER | | |

# PACKING




# PACKING PARTS LIST

| ⚠ | Ref.No. | Part No. | Part Name | Description | Local |
|---|---|---|---|---|---|
| | 1 | GG10281-010A-H | PACKING CASE | | |
| | 2 | LC10166-003B-H | CUSHION ASS'Y | 4pcs in 1set | |
| | 3 | GG30097-002A-H | POLY BAG | | |
| | 4 | GG30096-001A-H | POLY BAG | | |
| | 5 | ---------- | BATTERY | AA/R6 1.5V(x2) | |
| ⚠ | 6 | GGT0109-001A-H | INST BOOK | English | |
| ⚠ | 7 | GGT0110-001A-H | DIGEST MANUAL | Arabic,French,Persian,Russian | |
| ⚠ | 8 | QAM0054-001 | CONVERSION PLUG | | |
| | 9 | CM36447-00A-H | ROD ANTENNA | | |
| | 10 | RM-C360GY-1H | REMOCON UNIT | | |
| | 11 | GG30147-001B-H | CORNER LABEL | 2pcs in 1set | |
| ⚠ | 12 | CP30702-001 | REC KEEPING CAR | | |